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ABSTRACT

Generic skills are those overt and covert behaviors which are fundamental to the performance of many tasks and sub tasks carried out in a wide range of occupations and which are basic to job specific skills. Generally included in the term are: mathematics, communication, reasoning, interpersonal and manipulative skills. Excluded from generic skills are job specific skills obtainable as part of occupational orientation. In February, 1973, the Training Research and Development Station commenced a three phase pilot study directed to the formulation of generic skills. Phase one, March to July, 1973, examined mathematics and communication skills based on data obtained from 27 occupations. Phase two, May to September, 1973, examined reasoning and interpersonal skills using data from 35 occupations. Phase three, still in the planning stage, deals with the formulation of manipulative skills. The following sequential steps were identified for the formulation of generic skills for each of these phases: (1) taxonomy of skills, (2) data collection instruments, (3) data collection, (4) data analysis, (5) develop specifications and (6) dissemination. The intent of this report is to summarize the curriculum development which has been achieved for the mathematics and communications skills and outline the results which have been achieved to date in the reasoning and interpersonal skills. (MW)

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generic skills

in the REASONING and INTERPERSONAL DOMAINS

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Manpower and Immigration
Main-d'oeuvre et Immigration

ED 092785

GENERIC SKILLS

IN THE

REASONING AND INTERPERSONAL DOMAINS

by

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and

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Training Research and Development Station
Department of Manpower and Immigration
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BRIEF HISTORY OF THE STUDY

- Arthur De W. Smith

The original concepts and methodology for this study were invented and developed in January, 1973, with the assistance and guidance of D. Stuart Conger, Vernon Mullen, Glen Tippett and James Williams.

The Canadian Classification and Dictionary of Occupations, 1971,[1] was used as a basic data source to assist in the preliminary identification of generic skills and to select discrete occupations for analysis. Arnold Weeks provided practical advice and guidance on the use of the CCDO.

A feasibility study was carried out in February, 1973. The results justified the concept and methodology, and approval was obtained to continue the experiment for the mathematics, communications, reasoning and interpersonal skills.

Phase one of the study, which examined mathematics and communication skills, was carried out during the period March to July, 1973. Data was obtained, from 27 different occupations in Prince Albert, Regina, Saskatoon, and rural areas near Prince Albert. A total of 340 workers and 340 supervisors were interviewed to obtain the information on skill usage. The Saskatchewan (now Wascana) Institute of Applied Arts and Sciences collaborated by supervising the data collection process in Regina. Professor Bikkar Randhawa of the University of Saskatchewan developed and managed the statistical analyses. The results of this phase of the study were reported in the publications, *"Generic Skills"* and, *"Generic Skills Technical Supplement"* published in September, 1973.

At the request of various provincial and institutional officials seminars on this study were provided as follows:

DATE	LOCATION	REPRESENTATIVES
Jun. 1973	Davidson	Saskatchewan Committee of Institute Principals
Oct. 1973	Ottawa	Faculty of Algonquin College of Applied Arts and Technology
Oct. 1973	Ottawa	Officials of provinces of Ontario and Quebec and of the Department of Manpower and Immigration involved in occupational analyses

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1 Canadian Classification and Dictionary of Occupations, 1971, published under the authority of the Minister of Manpower and Immigration by Information Canada, Ottawa.

DATE	LOCATION	REPRESENTATIVES
Oct. 1973	Toronto	Staff of Ministry of Colleges and Universities and senior training officers representing community colleges
Oct. 1973	Prince Albert	Staff of Manitoba Department of Colleges and University Affairs and of community colleges
Nov. 1973	Halifax	Principals of Nova Scotia secondary vocational schools and adult vocational centres and officials of the maritime provinces' departments of education
Nov. 1973	Calgary	Faculty of Alberta Vocational Centre
Nov. 1973	Burnaby	Staff of Department of Education and of B.C. vocational schools
Nov. 1973	Toronto	Faculty of Humber College of Applied Arts and Technology
Dec. 1973	St. John's	Atlantic Region Co-ordinating Committee on BTSD
Dec. 1973	Windsor	Faculty of St. Clair College of Applied Arts and Technology

Course development officers, William O'Shea, Verne Powers, and Murdine Thorpe, under the supervision of Glen Tippett, commenced developing discrete learning packages for the identified skills in April 1973. These individualized packages, with the diagnostic, prescriptive and achievement tests, will be ready for pilot testing in September, 1974.

Phase two of the study, which is examining reasoning and interpersonal skills, commenced in May, 1973. Phillip W. Warren, a research/development consultant from Vancouver, with the assistance of Miss Gail Pischak, a student of the University of Saskatchewan, carried out an extensive literature search and identified nearly two hundred reasoning and interpersonal skills. These were organized and classified into taxonomic formats in September, 1973, with the assistance of A. Paul Van Oene, an instructor from Loyalist College, Bancroft, Ontario.

A revised survey questionnaire which integrates the mathematics, communications, reasoning and interpersonal skills was developed and field tested during October-November, 1973, with the assistance of James Depew, a development officer. Dr. Sidney Fine, of the W.E. Upjohn

Institute for Employment Research, Washington, D.C. who developed the Data, People and Things classification system, used in the Canadian Classification and Dictionary of Occupations (CCDO) and in the Dictionary of Occupational Titles (DOT)[2], provided constructive suggestions and criticisms on the content, organization and wording of the questionnaire and also provided valuable suggestions for the data collection process.

For the second phase it was decided to obtain occupational data from a larger number of occupations in a cross section of Canada. The collaboration of the following officials, who assisted in locating interviewers and supervising the interview process, is gratefully acknowledged.

LOCATION	COLLABORATORS
Brandon	Mr. H. Pallister Assiniboine Community College
Calgary	Mr. Richard F. Gaffney Department of Advanced Education
Halifax	Mr. John M. Murley Department of Education
Regina	Mr. Walter Houseman Wascana Institute of Applied Arts and Sciences
Toronto	Mr. William E. Sinnett Humber College of Applied Arts and Technology
Vancouver	Mr. J.E. Jones Regional Office Department of Manpower and Immigration

Data on 35 occupations, several of which were common to different areas of the country, was obtained in a survey of 450 workers and 450 supervisors in six provinces, during the period, November, 1973 to January, 1974. An additional 30 occupations at the first line, foremen/supervisory level, will be surveyed during the period, February-March, 1974.

In addition to the above, Mr. Garth Jackson of Fanshawe College of Applied Arts and Technology in London, Ontario, provided two staff interviewers who have collected and are sharing data on additional occupations.

Couse development officers, Paul Curtiss and James Depew commenced development of the instructional objectives in November, 1973. They will, under the supervision of Vernon Mullen, be developing discrete

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2 Dictionary of Occupational Titles, 1965 published by the United States Department of Labor.

learning packages for each of the identified reasoning and interpersonal skills along with the necessary diagnostic, prescriptive and achievement tests. A completion date for this task has not as yet been established but it is hoped that the central core of the most frequently used skills will be ready for pilot testing early in 1975.

An integrated report covering phases one and two is planned for publication in November, 1974. A concept study to examine the possibility of extending this study to include manipulative skills is planned to commence about December, 1974.

INTRODUCTION

- Arthur De W. Smith

Generic skills are those overt and covert behaviors which are fundamental to the performance of many tasks and sub tasks carried out in a wide range of occupations and which are basic to job specific skills.

Generic skills include many of the concepts and skills generally referred to as mathematics skills, communication skills, reasoning skills, interpersonal skills, and manipulative skills.

Examples of generic skills in each of the five areas mentioned above could include:

1. Mathematics skills - multiplying whole numbers
   - adding fractions
2. Communication skills - reading to determine job requirements
   - recording data on forms
3. Reasoning skills - scheduling work
   - diagnosing problems
   - making decisions
4. Interpersonal skills - giving rewards and discipline
   - using attending behaviors
   - using group maintenance skills
5. Manipulative skills - using hand/eye co-ordination
   - using proper body posture for lifting and carrying

Excluded from generic skills are knowledge and procedural items which are job or employer specific and which may be obtained as part of the orientation to a new job.

In February, 1973, the Training Research and Development Station commenced a three phase pilot study directed to the formulation of generic skills, as follows:

Phase 1 - Formulation of mathematics and communications skills;
Phase 2 - Formulation of reasoning and interpersonal skills;
Phase 3 - Formulation of manipulative skills.

The following sequential steps were identified for the formulation of generic skills for each of these phases:

1. Taxonomy of Skills: *To develop a classification system of possible generic skills identified through analysis and synthesis of educational and training curricula, reports of occupational analyses, the Canadian Classification and Dictionary of Occupations, other relevant literature and staff knowledge of the occupations.*

2. Data Collection Instruments: *To develop, pilot test and refine as necessary, an instrument or instruments which, through interviewing or other techniques, can be used to collect data from workers and their immediate supervisors to determine skills which are actually used by each occupation analyzed.*

3. Data Collection: *To collect data on skill use from a variety of occupations encompassing a cross section of employers in urban and rural areas. Employers are selected from a spectrum of large, small, specialized and government employers.*

4. Data Analysis: *To determine generic skills requirements for each occupation surveyed, the utility of the data collection instruments and processes, occupational and skill clusters, comparisons of skill requirements in different geographical locations, and where appropriate, anomolies between job requirements and the occupational training course data.*

5. Develop Specifications: *To prepare specifications for the development of prescriptive training modules which will facilitate the achievement of the specific generic skills needed by adults for chosen occupations, allow for recognition of skills already held, provide for continuous intake and exit of students and provide means by which adults may acquire additional skills at a time convenient and appropriate to career advancement.*

6. Dissemination: *To prepare and deliver oral and written reports covering the rationale, theory, methodology, data collection, analysis of findings, and the development specifications to concerned federal, provincial and educational institution officials.*

The intent of this progress report is to:

1. Summarize the curriculum development which has been achieved for the mathematics and communications skills.

2. Outline the results which have been achieved to date in the reasoning and interpersonal skills.

CURRICULUM DEVELOPMENT OF GENERIC MATHEMATICS AND COMMUNICATION SKILLS

- Glen Tippett

During recent years, several models for curriculum design have been employed to produce new programs and revise existing ones. Characteristically, many models exhibit inherent weaknesses in the techniques and procedures used to identify needs and translate these needs into instructional objectives. The formulation of generic skills has greatly increased the effectiveness of the need identification process through the skill analysis approach. Skills, appropriately stated, are inherently behavioral in nature, thus lending themselves to relatively easy translation into behavioral training objectives.

With a procedure as has been described in the methodology of the generic skills program, the curriculum developer is assisted to a large extent. Assuming that the skills survey does identify a universal set of skills associated with a group of occupations, and that certain clustering of these skills has been identified, the developer is faced with tasks in two main areas:

1. Developing discrete instructional units which incorporate appropriate content and methodology, and

2. Designing a system of organizing, packaging and describing these units to facilitate the effective delivery of instruction in a variety of settings to meet the needs of individuals within the given target population.

As with earlier programs developed by Saskatchewan NewStart and the Training Research and Development Station, the DACUM model[1] is the basic structure used. This model, modified as required to meet particular situations, has proven to be an effective tool in the design of many programs. Those familiar with DACUM will recognize the first phase as "Defining Terminal Behaviours". Those who have used the model have also recognized the extreme difficulty of identifying and formulating these behaviors. The generic skills survey method greatly simplified this process and, indeed, greatly improves the utility of the model.

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1 *Designing A Curriculum (DACUM)*, Department of Regional Economic Expansion, Ottawa, 1969.

To review, the phases[1] of the model are:

Phase 1. Defining Terminal Behaviours;
Phase 2. Designing Evaluation Systems;
Phase 3. Defining Instructional Unit Objectives;
Phase 4. Preparing Evaluation Instruments;
Phase 5. Preparing Learning Activities;
Phase 6. Preparing Individual Student Activities.

Basically, the model was employed in the development of the mathematics and communications skills curriculum. The following is a description of the activity and results to the time of preparing this progress report.

Stimuli for the development of the mathematics and communications skills curriculum came from both the survey results including the Development Specifications[2] and the existing Learning Individualized for Canadians[3] (LINC) program. The LINC program has been adequately described in other publications including the 1973 Generic Skills report. The basic process of LINC, that of facilitating individualized instructional through the four basic steps of diagnosis, placement, prescribed learning and evaluation, is also fundamental to the new mathematics and communications curriculum.

The three LINC courses, Developmental Reading, Functional Reading and Mathematics have been somewhat redefined and redeveloped to include the skill areas of reading, writing, listening, speaking, computing, applied measurement and basic algebra. Within these skill areas, the LINC objectives have been evaluated against the criteria derived from the survey and where necessary, additions, deletions and restatements were made. Principally, the new research and development activities were directed to producing individual instructional packages for listening and speaking skills.

OBJECTIVES OF DEVELOPMENT AND DEVELOPMENT ACTIVITIES

The program objectives are the overall intents or purposes of the training program. The principal purposes of the Generic Skills Mathematics and Communications curriculum are:

1. To provide an instructional system that incorporates techniques and instruments which can measure and

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1 The phases as stated here are somewhat modified from the original.

2 Smith, A.D., *Generic Skills*, 1973, Information Canada, Prince Albert, Saskatchewan.

3 *Learning Individualized for Canadians*, 1972, Saskatchewan NewStart Inc., Prince Albert, Saskatchewan.

provide recognition for skills attained both in and outside of formal learning environments.

2. To assist students to achieve skills in communications and mathematics which are generic to their chosen occupations.

Given the Development Specifications in the 1973 Generic Skills report, along with the results of the survey in tabulated form (see Annex A to this chapter) the development work has focused on design and development in the three main areas of content, process and components.

1. *Content. To identify and formulate appropriate instructional objectives and to cluster these objectives into generic skill clusters.*

The content, being derived from the generic skills identified, is represented by the instructional objectives. Instructional objectives are the immediate, sequenced and specific objectives on which evaluation items, instructional materials and instructional methods are based. They are stated in precise behavioural terms, including a definition of the behaviour, the conditions of the behaviour and the performance standards required.

The results of the mathematics and communications skills questionnaire provided information for the developers with respect to the *total content* of the program, along with information which could *guide the clustering* of the content into discrete sections of appropriate size. The instructional objectives provided in the 1973 report also guided the development work. Five courses have been identified and objectives are written and clustered for each. The five are *reading, writing, listening, speaking* and *mathematics*. To simplify communication of the scope of the content, the various clusters of objectives have been given descriptive titles. The content of each, as clustered, can be seen in Annexes B and C.

In each case, the objectives are identified as being those which support the terminal behaviour directly or are simply enabling of other instructional objectives. This identification was made to aid the construction of test instruments, principally comprehensive testing, to reduce the number of test items and to focus on the objectives which are directly translated from generic skills.

The total content of the program is seen as a universal set of generic skills from which can be drawn subsets of skills, in various configurations which are generic to specific occupations or occupational groups. Each of the five courses is organized into a number of *units* and each unit contains several *items*. The basic discrete *section* of the program is the *item*. The skills (objectives) incorporated in each item are those which have been identified as generic skills or are enabling to this learning of generic skills. Students will learn those skills which are generic to their occupational goals. The scope of the content is displayed in the charts in Annexes B and C by item name.

NOTE: *The organization of the charts does not necessarily show a sequence of instruction which would be followed by each student. It does, however, show an order of content for the purpose of description.*

2. Process. *To develop a general instructional strategy appropriate to the program objectives and the individual learning objectives.*

Basically, the individualized process of the LINC program is being employed in the mathematics and communications curriculum. In a macro sense, the four basic parts of the LINC process (diagnosis, placement, prescribed instruction and evaluation) can be applied to the total Generic Skills program or to a total course. Included with the general diagnosis and placement will be the determination of the generic skills required by the student. Secondly, having identified those skills required, the system will determine if the student has those skills. Should there be an indication that the student presently holds all the generic skills required, evaluation associated with end of training evaluation or certificate standards evaluation will be brought into the situation to assess the functional skill level.

In summary, the evaluation system includes:

a. A general placement evaluation to determine which instructional units require study to complete the student's skill profile for a chosen occupation or occupational area.

b. Specific diagnosis and placement evaluation to determine which specific instructional objectives have not been mastered.

c. Short term student-managed progress evaluation.

d. Comprehensive instructor-managed progress evaluation.

All these test instruments have been written for the different courses, but in the case of *listening* and *speaking*, which require audio-mediated tests, the audiotapes have not been completed.

In a micro sense, if a student needs a particular skill, and does not exhibit it, the diagnosis and placement system will place him at the appropriate starting point for prescribed instruction. In addition, the instructional strategy is such that an appropriate match of learning situations and learner styles can be made to facilitate skill development. This implies a variety of instructional materials in various media. Also, the ongoing evaluation of progress is individualized by the provision of short and long term evaluation instruments associated with each instructional package.

3. *Components. To collect, design and develop appropriate manuals, instructional materials and student progress accounting documents.*

The following components are planned, under development or completed:

a. An instructor's manual which is a guide to the instuctor's role as facilitator or as a manager of the learning environment within the context of the content and process of the program. It is a guide to objectives, instructional strategies, evaluation techniques, and instructional support systems.

b. Discrete instructional packages, each representing an item of the program. Each of these packages includes a *diagnosis and placement instrument* for specific placement by objectives, a *guide to the selection and use of instructional materials* which are referenced to objectives, and *evaluation instruments* to evaluate mastery of the objectives following instruction. Some initial materials have been developed in the listening skills where appropriate commercial materials could not be identified.

c. An evaluation system which will determine the repertoire of skills held by the student with respect to the universal set of skills in the program. This evaluation system will include instruments for pre-instructional and post-instructional evaluation.

d. A student progress recording and documenting system which can be translated into certification levels appropriate to the institutional requirements.

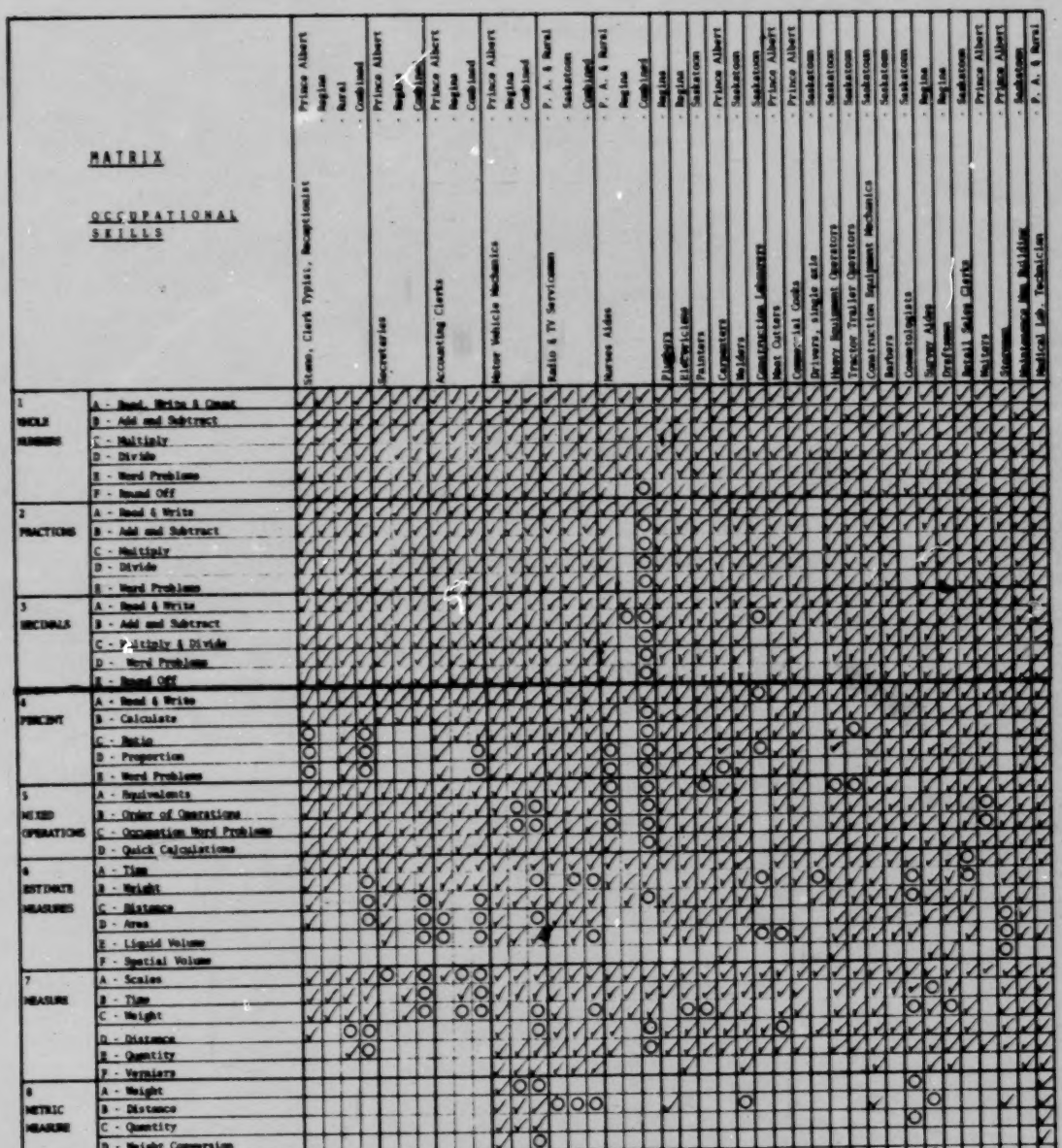
ANNEXURES TO CHAPTER III

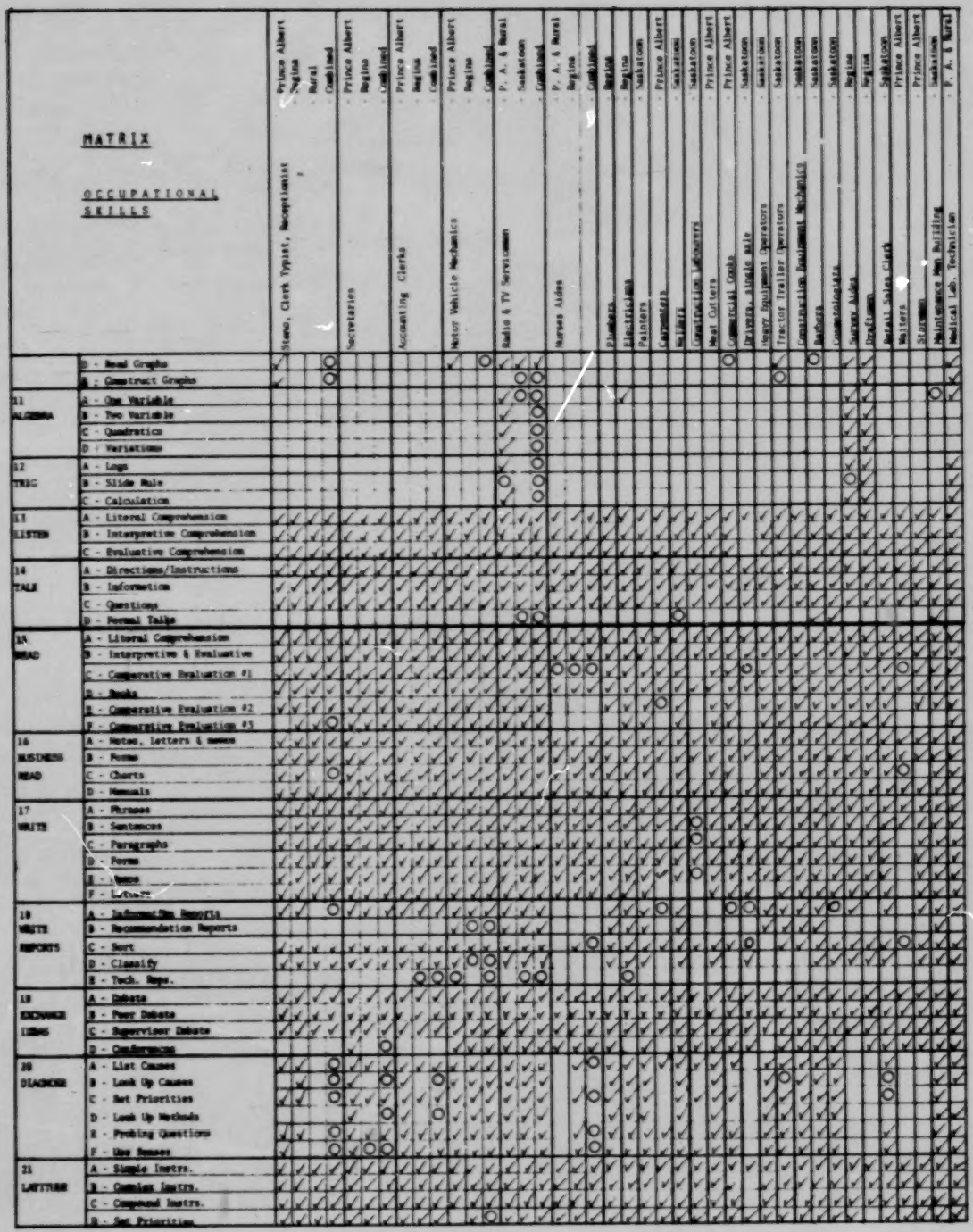
ANNEX A - MATHEMATICS AND COMMUNICATIONS SKILLS AND OCCUPATIONS MATRIX

ANNEX B - COMMUNICATIONS CONTENT

ANNEX C - MATHEMATICS CONTENT

ANNEX A to
CHAPTER II




MATRIX
OCCUPATIONAL SKILLS
Stenog., Clerk Typist, Receptionist - Prince Albert, Regina, Rural, Combined
Secretaries - Prince Albert, Regina, Combined
Accounting Clerks - Prince Albert, Regina, Combined
Motor Vehicle Mechanics - Prince Albert, Regina, Combined
Radio & TV Servicemen - P. A. & Rural, Saskatoon, Combined
Nurses Aides - P. A. & Rural, Regina, Combined
Plumbers - Regina
Electricians - Regina, Saskatoon
Painters - Saskatoon
Carpenters - Prince Albert
Welders - Saskatoon
Construction Labourers - Saskatoon
Meat Cutters - Prince Albert
Commercial Cooks - Prince Albert
Drivers, Single Axle - Saskatoon
Heavy Equipment Operators - Saskatoon
Tractor Trailer Operators - Saskatoon
Construction Equipment Mechanics - Saskatoon
Barbers - Saskatoon
Cosmetologists - Saskatoon
Survey Aides - Regina
Draftsmen - Regina
Retail Sales Clerk - Saskatoon
Waiters - Prince Albert
Storemen - Prince Albert
Maintenance Man Building - Saskatoon
Medical Lab. Technician - P. A. & Rural
D - Read Graphs
E - Construct Graphs
11 ALGEBRA
A - One Variable
B - Two Variable
C - Quadratics
D - Variations
12 TRIG
A - Logs
B - Slide Rule
C - Calculation
13 LISTEN
A - Literal Comprehension
B - Interpretive Comprehension
C - Evaluative Comprehension
14 TALK
A - Directions/Instructions
B - Information
C - Questions
D - Formal Talks
15 READ
A - Literal Comprehension
B - Interpretive & Evaluative
C - Comparative Evaluation #1
D - Books
E - Comparative Evaluation #2
F - Comparative Evaluation #3
16 BUSINESS READ
A - Notes, Letters & memos
B - Forms
C - Charts
D - Manuals
17 WRITE
A - Phrases
B - Sentences
C - Paragraphs
D - Forms
E - Memos
F - Letters
18 WRITE REPORTS
A - Informative Reports
B - Recommendation Reports
C - Sort
D - Classify
E - Tech. Repo.
19 EXCHANGE IDEAS
A - Debate
B - Poor Debate
C - Supervisor Debate
D - Conferences
20 DIAGNOSE
A - List Causes
B - Look Up Causes
C - Set Priorities
D - Look Up Methods
E - Probing Questions
F - Use Senses
21 LAYTHEM
A - Simple Instrs.
B - Complex Instrs.
C - Compound Instrs.
D - Set Priorities

ANNEX B to
CHAPTER II

COMMUNICATIONS

Scope and Clustering of Content

READING

WORD ANALYSIS

- Plurals
- Prefixes, Suffixes and Root Words
- Contractions and Abbreviations

WORD MEANING

- Dictionary
- Synonyms, Antonyms and Homonyms
- Meaning from Context

LITERAL COMPREHENSION

- Main Idea
- Detail
- Sequence of Events

INTERPRETIVE COMPREHENSION

- Relationships
- Inferences
- Character

EVALUATIVE COMPREHENSION

- Comparison
- Fact and Opinion
- Writer's Intent

APPLIED READING I

- Charts and Tables
- Forms
- Notes, Memos and Letters

APPLIED READING II

- Manuals
- Reports

WRITING

SENTENCE STRUCTURES

- Sentences
- Capitalization and Punctuation
- Sentence Construction
- Word Usage

COMPOSITION STRUCTURES

- Paragraphs
- Compositions

CORRESPONDENCE

- Format Styles
- Notes and Memos
- Letters
- Forms

REPORTS

- Information Reports
- Recommendation Reports

LISTENING

ATTENDING BEHAVIORS

- Speaker Support
- Listener Effectiveness

LITERAL COMPREHENSION

- Meaning From Context
- Main Idea
- Details

INTERPRETIVE COMPREHENSION

- Relationships
- Inferences
- Speaker's Intent
- Note Taking

SPEAKING

BASIC SKILLS

- Pronunciation
- Diction and Word Choice
- Fluency
- Organization of Ideas

FUNCTIONAL SKILLS

- Information and Directions
- Questions
- Fact and Opinion

PUBLIC SPEAKING

- Formal Meetings
- Formal Speech Delivery
- Formal Speech Preparation

EXCHANGING IDEAS

- Speak With Associates
- Telephone Skills
- Discussion and Debate
- Conferences

ANNEX C to
CHAPTER II

MATHEMATICS

SCOPE AND CLUSTERING OF CONTENT

WHOLE NUMBERS

Reading Writing and Rounding Off	Addition and Subtraction	Multiplication and Division	Problems

FRACTIONS

Reading Writing and Rounding Off	Addition and Subtraction	Multiplication and Division	Problems

DECIMALS

Reading Writing and Rounding Off	Addition and Subtraction	Multiplication and Division	Equivalents	Problems

PERCENT

Ratio and Proportion	Reading Writing and Equivalents	Calculations	Problems

MEASUREMENT

Graduated Scales	Time	Distance	Weight	Capacity

METRIC UNITS

Distance	Weight	Capacity	Conversions

GEOMETRIC FIGURES

Plane and Solid Figures	Sketching and Drawing	Perimeter	Area	Volume

SCALE DRAWINGS and GRAPHS

Scale Drawings	Drawing to Scale	Reading Graphs	Constructing Graphs

INTERGERS and RATIONALS

Reading and Writing	Addition and Subtraction	Multiplication and Division	Factoring

INTRODUCTORY ALGEBRA

Variables and Expressions	Open Sentences	Algebraic Solutions	Powers

PRELIMINARY DEVELOPMENT OF REASONING AND INTERPERSONAL SKILLS

- Arthur De W. Smith
- Walter J. Kawula

A. TAXONOMIES OF SKILLS

Preliminary to the development of skill taxonomies a thorough search of the available literature was carried out to derive interpersonal and reasoning skills. This task was commenced in May, 1973, and as a major undertaking, was completed in September. Some elements, and in particular skills, used at the supervisory level, were not completely identified at that time.[1]

It was, of course, impossible to search all literature to achieve this task. Particular emphasis was placed on the following as sources of information:

1. Reports and Abstracts disseminated by ERIC (Educational Research Information Centre of the U.S. Office of Education).

2. Various collections of abstracts such as, "Psychological Abstracts", "Sociological Abstracts" and, "Dissertations Abstracts International".

3. The Training Research and Development Station library.

4. The University of Saskatchewan libraries at Saskatoon campus.

5. The work carried out by Saskatchewan NewStart in the development of the Life Skills Courses.

Although this task was fruitful, it was exceedingly difficult and time consuming for a number of reasons, particularly the following:

1. The majority of researchers tend to express their notions of skills in abstract terms or in relationship to the cognitive requirements rather than in behavioral language.

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1 This task was reviewed during December, 1973 and January, 1974. Additional skills were added to the taxonomies at that time.

2. Much of the literature is uni-discipline orientated and the skills/knowledge are expressed in highly specific occupational or in professional terminology.

As a result of this search, however, nearly two hundred interpersonal and reasoning functions and skills were identified.

The next task undertaken was the development of a structure in which to organize those skills. The reasoning skills were temporarily set aside, and, an attempt was made to order and sequence the interpersonal skills (as had been done for the mathematics and communications skills) by using the levels of People Functions used in the Canadian Classification and Dictionary of Occupations (CCDO). These levels are as follows:

Level 0 - Mentoring
Level 1 - Negotiating
Level 2 - Instructing
Level 3 - Supervising
Level 4 - Diverting
Level 5 - Persuading
Level 6 - Speaking-Signalling
Level 7 - Serving

The functional descriptions for these levels were rephrased in behavioral language and considered as terminal skill objectives. Several unsuccessful attempts were made to match the identified skills with those descriptions. Many of the identified skills did match those levels but a considerable number could not be placed either because some skills appeared to belong to several levels or in other cases because the skills did not seem to be supportive to any of the identified levels. It was therefore decided to develop an alternative structure or framework in which to organize the skills.

From a careful study of the interpersonal skills it quickly became obvious that the vast majority of them related to oral communications between people. This stimulated the belief that the skills could be categorized more readily by communication functions than by the CCDO descriptors. As a result the following terminal behaviors were identified and sequenced with the hierarchy starting from level 8 (most basic behavior) to level 1 (most complex behavior).

Level 8 - Use communication attending behaviors.

Level 7 - Converse in one to one communication.

Level 6 - Control group discussions.

Level 5 - Participate in factual presentations.

Level 4 - Participate in conceptual presentations.

Level 3 - Participate in persuasive presentations.

Level 2 - Use supervisory/instructional communication.

Level 1 - Use interviewing/counselling communication.

The above hierarchy may have a number of theoretical restraints. It did, however, serve the purpose for which it was designed and the task of developing a taxonomy of skills was readily carried out. The interpersonal taxonomy is attached as Annex A to this chapter.

It is important to realize that this taxonomy was developed as a means to an end - the end being the development of an instrument to collect data on skill usage. Errors of omission and commission, as they are identified, are rectified in the data collection instrument.

A taxonomy for reasoning skills was also developed. The terminal objectives identified for this area are as follows:

Level 7 - Obtain and organize job related information.

Level 6 - Estimate, sequence tasks and set job priorities.

Level 5 - Set job objectives goals and determine methods of achieving them.

Level 4 - Define or diagnose job problems.

Level 3 - Select methods to resolve job problems.

Level 2 - Plan and co-ordinate.

Level 1 - Implement work.

The reasoning taxonomy is attached as Annex B to this chapter.

B. DATA COLLECTION INSTRUMENT

The following criteria were established to guide the development of a data collection instrument:

*1. To gather information on skills used on the job rather than skills held by the worker.

*2. Not to quantify or qualify the information in terms of:

a. the frequency of skill use, or
b. the importance of the skill.

*3. To gather data on skills used from workers and from their immediate supervisors.

*4. To determine skill use on job entry as well as during later job performance.

*5. To introduce skills which are believed to be common and easily recognizable by workers at the beginning of the instrument to prevent a negative reaction or the possibility of workers making an assumption that they should supply some positive answers.

*6. To base questions on readily observable behavior and not to question mental or covert behaviors unless it is found impossible to obtain information by other means.

*7. To word the questions at a level believed to be within workmen's repertoire of word usage. (This meant, in some instances, being a bit imprecise to ensure that the workman could respond.)

*8. To sequence related skills to help ensure that the interviewees could quickly and readily respond to the questions.

*9. To be designed so that unsophisticated interviewers, with minimum training, can obtain consistent results.

10. To integrate the new instrument with the previous questionnaire so that the revised form will include mathematics, communications, reasoning and interpersonal skills.

---

* Those criteria marked with an asterisk were also used in the development of the mathematics and communications questionnaire.

11. To identify each item by a serial number to assist in the later steps of analysis.

12. To keep the instrument reasonably short and easy to administer to help ensure that it had no negative effect on the employers or workers. The specification called for an average interview time of 40 minutes and for an average total employer time of no more than 75 minutes.

There is some duplication or overlap of skills in the three taxonomies. This necessitated careful consideration to ensure that unnecessary duplication of questions did not occur.

The draft instrument was pre-tested with 20 respondents in the Prince Albert area representative of the occupations selected for the second phase. This pre-test yielded some inadequacies in sequencing and wording, which were readily remedied. It was also found that the interviewers often had to make oral explanations when moving to a new section of the questionnaire. Lead statements were inserted in the instrument to achieve standardization of the explanations.

The instrument at this stage was subjected to a critical study by a panel of staff members with the assistance of Dr. Sidney Fine of the W.E. Uphohn Institute for Employment Research, Washington, D.C. This resulted in a number of refinements in all areas of the questionnaire. The resulting instrument is attached at Annex C to this chapter.

Following is a summary of the major changes in format introduced as a result of this phase of the study:

1. Cover Page. Boxes were added to identify worker and supervisor interviews and follow up information.

2. Inside Cover. Instructions for use of the questionnaire were added as a reminder for interviewers.

3. Lead Statements. Lead statements were added to introduce each block of related items.

4. Omit Sections. Several by-pass sections were introduced using arrows to guide the interviewer (for example, serial 7).

5. Recording. Three columns were introduced for recording responses. The instructions on the inside over (number 6) describe their use. Each item is represented by three numbered boxes to ensure consistency of recording.

6. Reading Sections. Some of the items (80-85 and 155-172) were designed to be read by the respondent. It was believed that since a choice is requested in these sections, it could be more accurately handled in this manner.

7. Interviewee Guide. This page was designed to assist the interviewee in retaining the context of the items.

8. Introductory Letter. This was added to the questionnaire to introduce the interviewer and to provide the respondent with a record of the interview.

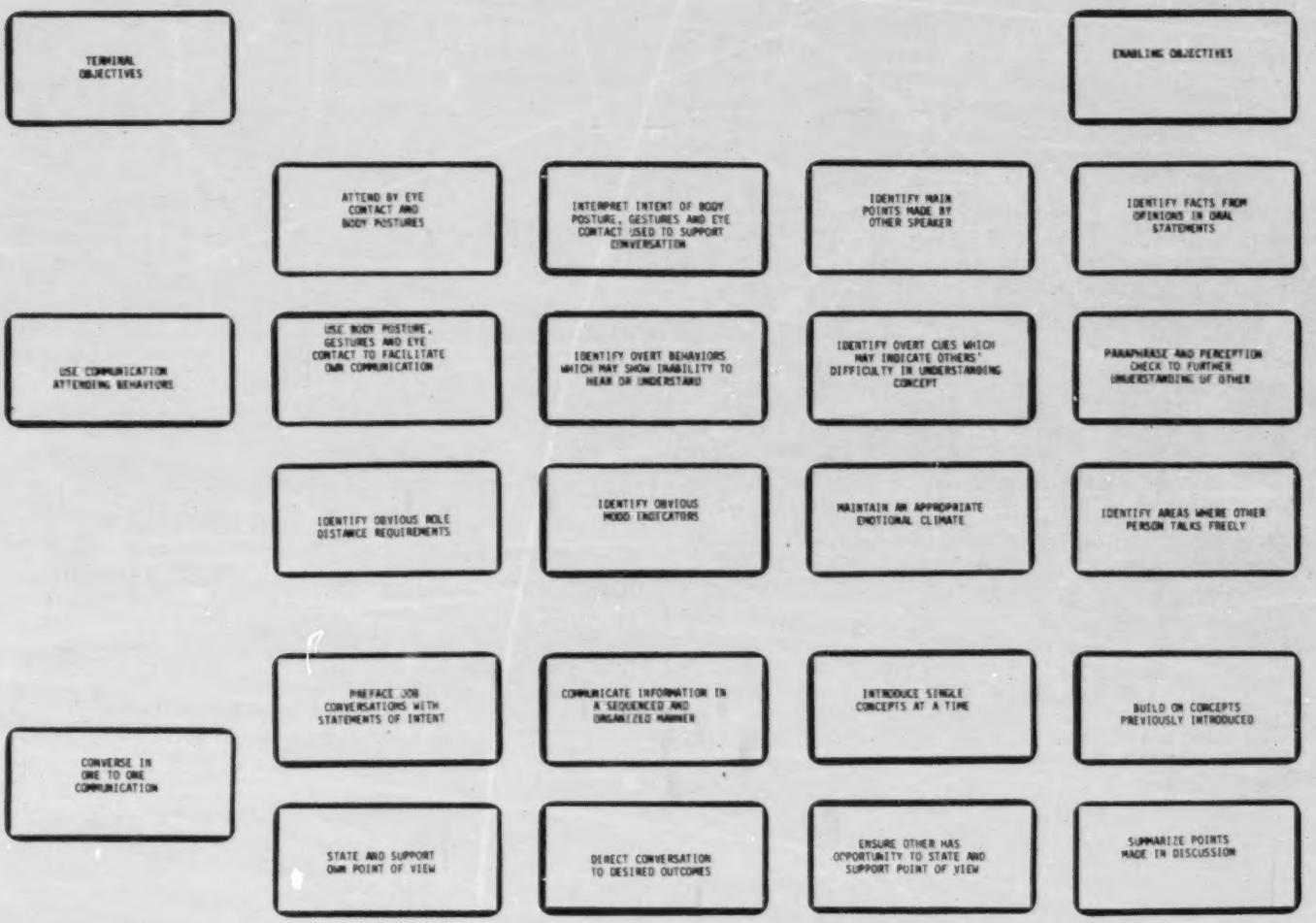
ANNEXURES TO CHAPTER IV

ANNEX A - TAXONOMY OF INTERPERSONAL SKILLS

ANNEX B - TAXONOMY OF REASONING SKILLS

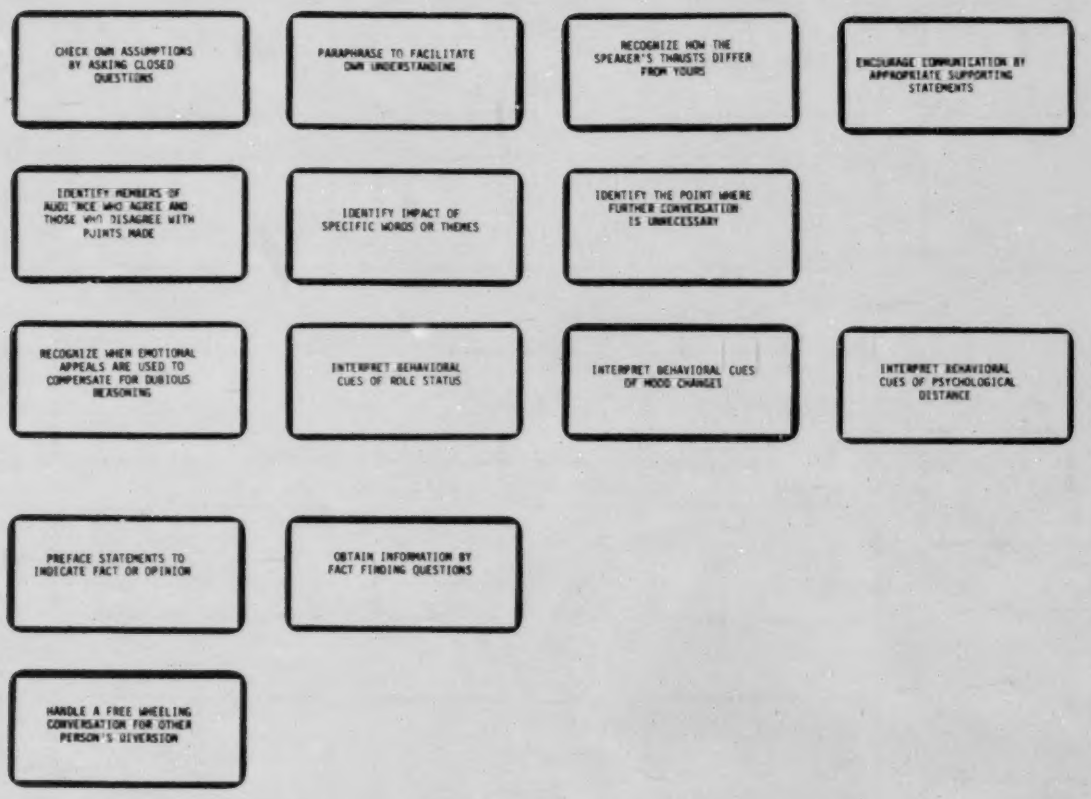
ANNEX C - GENERIC DATA AND PEOPLE SKILLS QUESTIONNAIRE

TAXONOMY OF

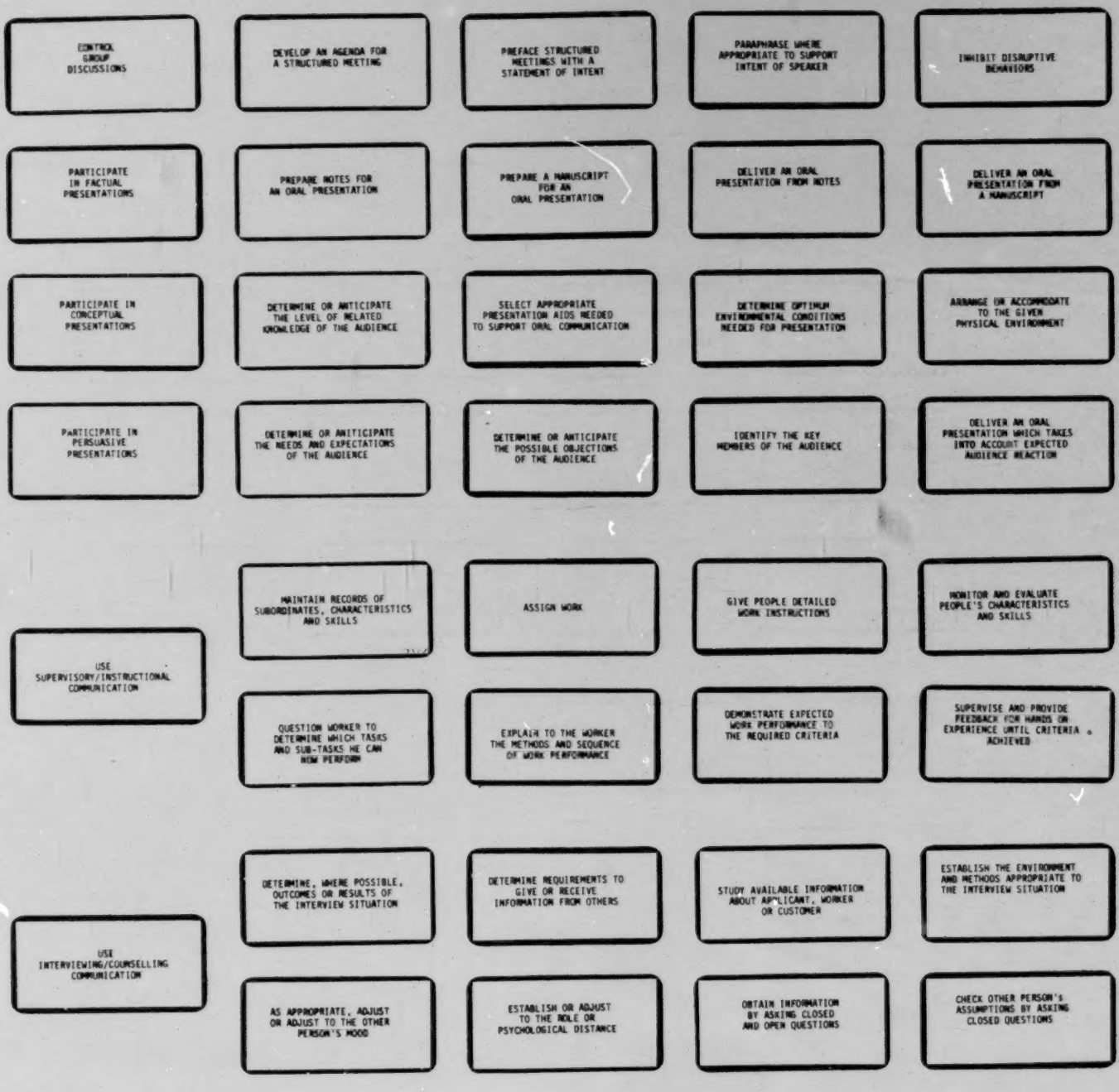

TERMINAL OBJECTIVES
ENABLING OBJECTIVES
USE COMMUNICATION ATTENDING BEHAVIORS
ATTEND BY EYE CONTACT AND BODY POSTURES
INTERPRET INTENT OF BODY POSTURE, GESTURES AND EYE CONTACT USED TO SUPPORT CONVERSATION
IDENTIFY MAIN POINTS MADE BY OTHER SPEAKER
IDENTIFY FACTS FROM OPINIONS IN ORAL STATEMENTS
USE BODY POSTURE, GESTURES AND EYE CONTACT TO FACILITATE OWN COMMUNICATION
IDENTIFY OVERT BEHAVIORS WHICH MAY SHOW INABILITY TO HEAR OR UNDERSTAND
IDENTIFY OVERT CUES WHICH MAY INDICATE OTHERS' DIFFICULTY IN UNDERSTANDING CONCEPT
PARAPHRASE AND PERCEPTION CHECK TO FURTHER UNDERSTANDING OF OTHER
IDENTIFY OBVIOUS ROLE DISTANCE REQUIREMENTS
IDENTIFY OBVIOUS MOOD INDICATORS
MAINTAIN AN APPROPRIATE EMOTIONAL CLIMATE
IDENTIFY AREAS WHERE OTHER PERSON TALKS FREELY
CONVERSE IN ONE TO ONE COMMUNICATION
PREFACE JOB CONVERSATIONS WITH STATEMENTS OF INTENT
COMMUNICATE INFORMATION IN A SEQUENCED AND ORGANIZED MANNER
INTRODUCE SINGLE CONCEPTS AT A TIME
BUILD ON CONCEPTS PREVIOUSLY INTRODUCED
STATE AND SUPPORT OWN POINT OF VIEW
DIRECT CONVERSATION TO DESIRED OUTCOMES
ENSURE OTHER HAS OPPORTUNITY TO STATE AND SUPPORT POINT OF VIEW
SUMMARIZE POINTS MADE IN DISCUSSION

INTERPERSONAL SKILLS

ANNEX A to
CHAPTER IV


CHECK OWN ASSUMPTIONS BY ASKING CLOSED QUESTIONS
PARAPHRASE TO FACILITATE OWN UNDERSTANDING
RECOGNIZE HOW THE SPEAKER'S THRUSTS DIFFER FROM YOURS
ENCOURAGE COMMUNICATION BY APPROPRIATE SUPPORTING STATEMENTS
IDENTIFY MEMBERS OF AUDIENCE WHO AGREE AND THOSE WHO DISAGREE WITH POINTS MADE
IDENTIFY IMPACT OF SPECIFIC WORDS OR THEMES
IDENTIFY THE POINT WHERE FURTHER CONVERSATION IS UNNECESSARY
RECOGNIZE WHEN EMOTIONAL APPEALS ARE USED TO COMPENSATE FOR DUBIOUS REASONING
INTERPRET BEHAVIORAL CUES OF ROLE STATUS
INTERPRET BEHAVIORAL CUES OF MOOD CHANGES
INTERPRET BEHAVIORAL CUES OF PSYCHOLOGICAL DISTANCE
PREFACE STATEMENTS TO INDICATE FACT OR OPINION
OBTAIN INFORMATION BY FACT FINDING QUESTIONS
HANDLE A FREE WHEELING CONVERSATION FOR OTHER PERSON'S DIVERSION

continued on pages
27-28


CONTROL GROUP DISCUSSIONS
DEVELOP AN AGENDA FOR A STRUCTURED MEETING
PREFACE STRUCTURED MEETINGS WITH A STATEMENT OF INTENT
PARAPHRASE WHERE APPROPRIATE TO SUPPORT INTENT OF SPEAKER
INHIBIT DISRUPTIVE BEHAVIORS
PARTICIPATE IN FACTUAL PRESENTATIONS
PREPARE NOTES FOR AN ORAL PRESENTATION
PREPARE A MANUSCRIPT FOR AN ORAL PRESENTATION
DELIVER AN ORAL PRESENTATION FROM NOTES
DELIVER AN ORAL PRESENTATION FROM A MANUSCRIPT
PARTICIPATE IN CONCEPTUAL PRESENTATIONS
DETERMINE OR ANTICIPATE THE LEVEL OF RELATED KNOWLEDGE OF THE AUDIENCE
SELECT APPROPRIATE PRESENTATION AIDS NEEDED TO SUPPORT ORAL COMMUNICATION
DETERMINE OPTIMUM ENVIRONMENTAL CONDITIONS NEEDED FOR PRESENTATION
ARRANGE OR ACCOMMODATE TO THE GIVEN PHYSICAL ENVIRONMENT
PARTICIPATE IN PERSUASIVE PRESENTATIONS
DETERMINE OR ANTICIPATE THE NEEDS AND EXPECTATIONS OF THE AUDIENCE
DETERMINE OR ANTICIPATE THE POSSIBLE OBJECTIONS OF THE AUDIENCE
IDENTIFY THE KEY MEMBERS OF THE AUDIENCE
DELIVER AN ORAL PRESENTATION WHICH TAKES INTO ACCOUNT EXPECTED AUDIENCE REACTION
USE SUPERVISORY/INSTRUCTIONAL COMMUNICATION
MAINTAIN RECORDS OF SUBORDINATES, CHARACTERISTICS AND SKILLS
ASSIGN WORK
GIVE PEOPLE DETAILED WORK INSTRUCTIONS
MONITOR AND EVALUATE PEOPLE'S CHARACTERISTICS AND SKILLS
QUESTION WORKER TO DETERMINE WHICH TASKS AND SUB-TASKS HE CAN NOW PERFORM
EXPLAIN TO THE WORKER THE METHODS AND SEQUENCE OF WORK PERFORMANCE
DEMONSTRATE EXPECTED WORK PERFORMANCE TO THE REQUIRED CRITERIA
SUPERVISE AND PROVIDE FEEDBACK FOR HANDS ON EXPERIENCE UNTIL CRITERIA ACHIEVED
USE INTERVIEWING/COUNSELLING COMMUNICATION
DETERMINE, WHERE POSSIBLE, OUTCOMES OR RESULTS OF THE INTERVIEW SITUATION
DETERMINE REQUIREMENTS TO GIVE OR RECEIVE INFORMATION FROM OTHERS
STUDY AVAILABLE INFORMATION ABOUT APPLICANT, WORKER OR CUSTOMER
ESTABLISH THE ENVIRONMENT AND METHODS APPROPRIATE TO THE INTERVIEW SITUATION
AS APPROPRIATE, ADJUST OR ADJUST TO THE OTHER PERSON'S MOOD
ESTABLISH OR ADJUST TO THE ROLE OR PSYCHOLOGICAL DISTANCE
OBTAIN INFORMATION BY ASKING CLOSED AND OPEN QUESTIONS
CHECK OTHER PERSON'S ASSUMPTIONS BY ASKING CLOSED QUESTIONS

ACHIEVE COMPROMISES BETWEEN POINTS OF VIEW

CLARIFY INTENT OF OTHER'S COMMUNICATION BY USING PROBING QUESTIONS

ENSURE THAT EACH PERSON CONTRIBUTES TO GROUP CONVERSATION COMMENSURATE WITH THEIR ROLE AND THE VALUE OF WHAT THEY HAVE TO OFFER

SUMMARIZE IDEAS, POINTS AND DECISIONS

POLL TO DETERMINE CONCENSUS OF GROUP

IDENTIFY APPROPRIATE AUDIENCE RESPONSES TO BE MADE DURING OR AFTER A PRESENTATION

BE ABLE TO ASK QUESTIONS OR MAKE STATEMENTS DURING OR AFTER A PRESENTATION

DELIVER ORAL PRESENTATION, USING AIDS AS NECESSARY

INVITE AUDIENCE INTERACTION

HANDLE AUDIENCE INTERACTION BY PARAPHRASING, SUPPORT OR AUTHORIATIVE STATEMENTS

HANDLE IRRELEVENT OR DISTRACTING AUDIENCE BEHAVIORS

MODIFY PRESENTATION TO ACHIEVE AUDIENCE RAPPORT

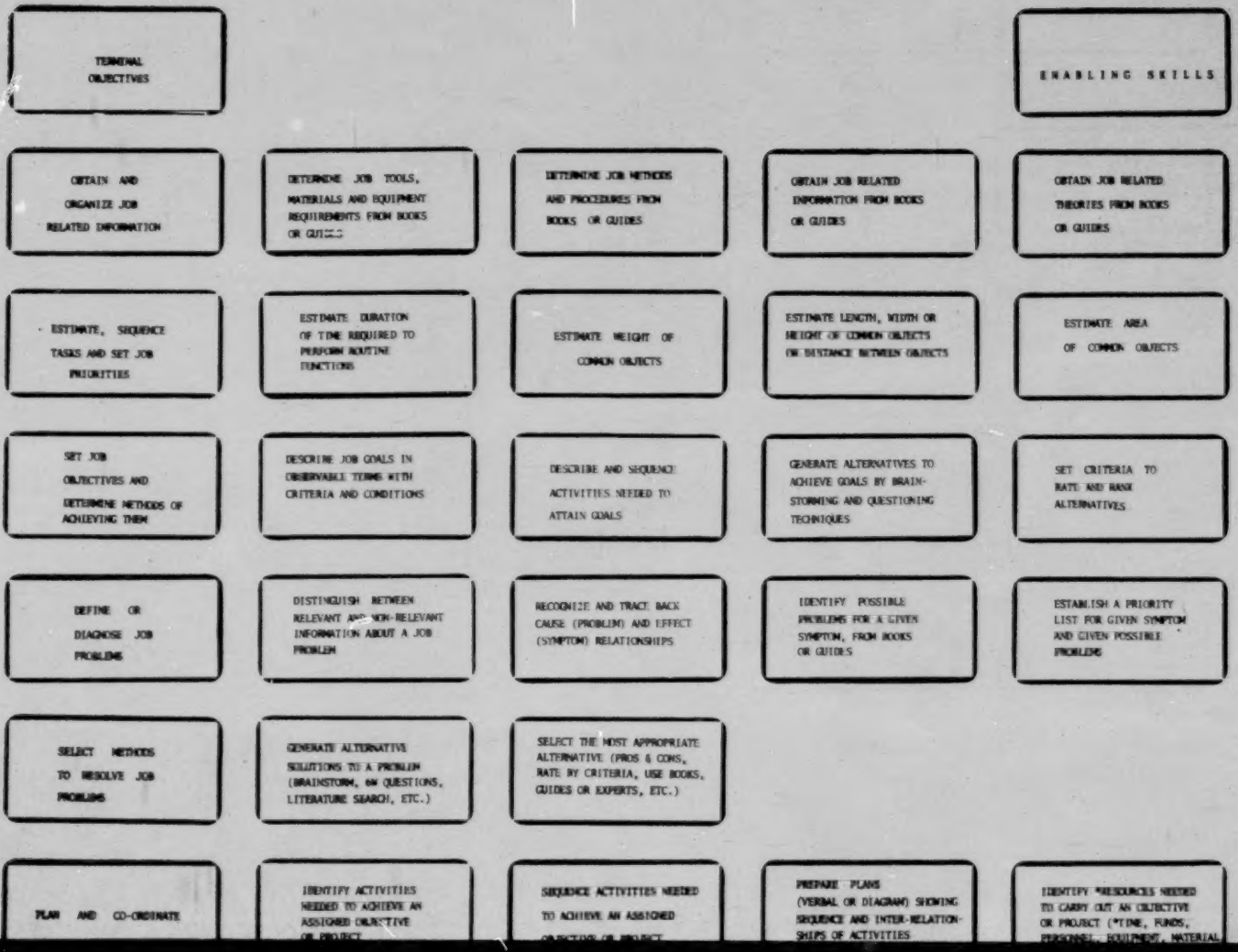
IDENTIFY BEHAVIORAL CUES WHICH INDICATE AUDIENCE ACCEPTANCE OR REJECTION

PROVIDE CONSTRUCTIVE FEEDBACK TO OTHER PEOPLE

AS APPROPRIATE, COMPROMISE TO EFFECT RESOLUTION

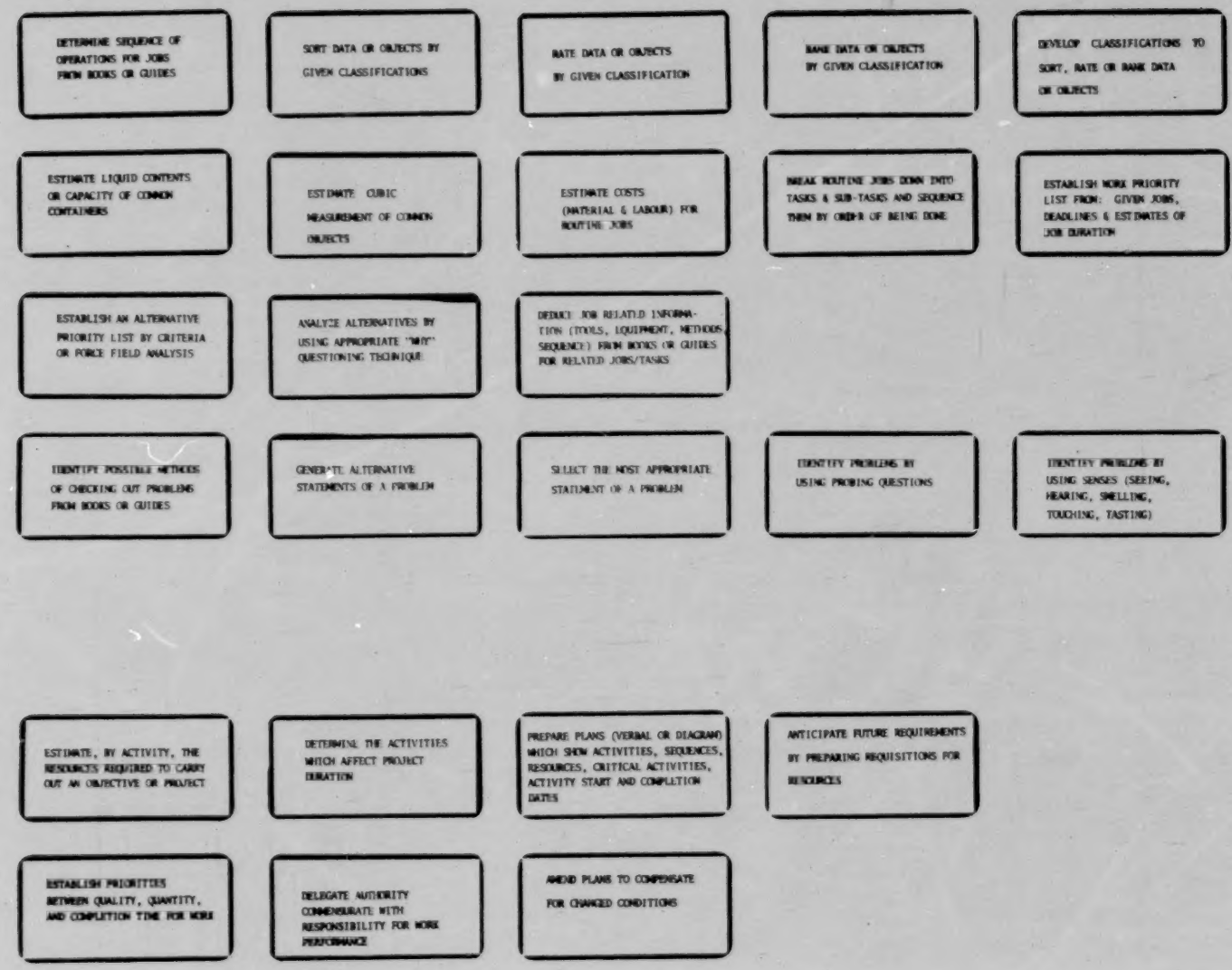
ENSURE BEHAVIORAL CHANGE BY APPROPRIATE FEEDBACK OR DISCIPLINE

TAXONOMY OF


TERMINAL OBJECTIVES
ENABLING SKILLS
OBTAIN AND ORGANIZE JOB RELATED INFORMATION
DETERMINE JOB TOOLS, MATERIALS AND EQUIPMENT REQUIREMENTS FROM BOOKS OR GUIDES
DETERMINE JOB METHODS AND PROCEDURES FROM BOOKS OR GUIDES
OBTAIN JOB RELATED INFORMATION FROM BOOKS OR GUIDES
OBTAIN JOB RELATED THEORIES FROM BOOKS OR GUIDES
ESTIMATE, SEQUENCE TASKS AND SET JOB PRIORITIES
ESTIMATE DURATION OF TIME REQUIRED TO PERFORM ROUTINE FUNCTIONS
ESTIMATE WEIGHT OF COMMON OBJECTS
ESTIMATE LENGTH, WIDTH OR HEIGHT OF COMMON OBJECTS OR DISTANCE BETWEEN OBJECTS
ESTIMATE AREA OF COMMON OBJECTS
SET JOB OBJECTIVES AND DETERMINE METHODS OF ACHIEVING THEM
DESCRIBE JOB GOALS IN OBSERVABLE TERMS WITH CRITERIA AND CONDITIONS
DESCRIBE AND SEQUENCE ACTIVITIES NEEDED TO ATTAIN GOALS
GENERATE ALTERNATIVES TO ACHIEVE GOALS BY BRAIN-STORMING AND QUESTIONING TECHNIQUES
SET CRITERIA TO RATE AND RANK ALTERNATIVES
DEFINE OR DIAGNOSE JOB PROBLEMS
DISTINGUISH BETWEEN RELEVANT AND NON-RELEVANT INFORMATION ABOUT A JOB PROBLEM
RECOGNIZE AND TRACE BACK CAUSE (PROBLEM) AND EFFECT (SYMPTOM) RELATIONSHIPS
IDENTIFY POSSIBLE PROBLEMS FOR A GIVEN SYMPTOM, FROM BOOKS OR GUIDES
ESTABLISH A PRIORITY LIST FOR GIVEN SYMPTOM AND GIVEN POSSIBLE PROBLEMS
SELECT METHODS TO RESOLVE JOB PROBLEMS
GENERATE ALTERNATIVE SOLUTIONS TO A PROBLEM (BRAINSTORM, 6M QUESTIONS, LITERATURE SEARCH, ETC.)
SELECT THE MOST APPROPRIATE ALTERNATIVE (PROS & CONS, RATE BY CRITERIA, USE BOOKS, GUIDES OR EXPERTS, ETC.)
PLAN AND CO-ORDINATE
IDENTIFY ACTIVITIES NEEDED TO ACHIEVE AN ASSIGNED OBJECTIVE OR PROJECT
SEQUENCE ACTIVITIES NEEDED TO ACHIEVE AN ASSIGNED
PREPARE PLANS (VERBAL OR DIAGRAM) SHOWING SEQUENCE AND INTER-RELATION-SHIPS OF ACTIVITIES
IDENTIFY *RESOURCES NEEDED TO CARRY OUT AN OBJECTIVE OR PROJECT (*TIME, FUNDS, PERSONNEL, EQUIPMENT, MATERIAL

REASONING SKILLS

ANNEX B to
CHAPTER IV


DETERMINE SEQUENCE OF OPERATIONS FOR JOBS FROM BOOKS OR GUIDES
SORT DATA OR OBJECTS BY GIVEN CLASSIFICATIONS
RATE DATA OR OBJECTS BY GIVEN CLASSIFICATION
RANK DATA OR OBJECTS BY GIVEN CLASSIFICATION
DEVELOP CLASSIFICATIONS TO SORT, RATE OR RANK DATA OR OBJECTS
ESTIMATE LIQUID CONTENTS OR CAPACITY OF COMMON CONTAINERS
ESTIMATE CUBIC MEASUREMENT OF COMMON OBJECTS
ESTIMATE COSTS (MATERIAL & LABOUR) FOR ROUTINE JOBS
BREAK ROUTINE JOBS DOWN INTO TASKS & SUB-TASKS AND SEQUENCE THEM BY ORDER OF BEING DONE
ESTABLISH WORK PRIORITY LIST FROM: GIVEN JOBS, DEADLINES & ESTIMATES OF JOB DURATION
ESTABLISH AN ALTERNATIVE PRIORITY LIST BY CRITERIA OR FORCE FIELD ANALYSIS
ANALYZE ALTERNATIVES BY USING APPROPRIATE "WHY" QUESTIONING TECHNIQUE
DEDUCE JOB RELATED INFORMATION (TOOLS, EQUIPMENT, METHODS SEQUENCE) FROM BOOKS OR GUIDES FOR RELATED JOBS/TASKS
IDENTIFY POSSIBLE METHODS OF CHECKING OUT PROBLEMS FROM BOOKS OR GUIDES
GENERATE ALTERNATIVE STATEMENTS OF A PROBLEM
SELECT THE MOST APPROPRIATE STATEMENT OF A PROBLEM
IDENTIFY PROBLEMS BY USING PROBING QUESTIONS
IDENTIFY PROBLEMS BY USING SENSES (SEEING, HEARING, SMELLING, TOUCHING, TASTING)
ESTIMATE, BY ACTIVITY, THE RESOURCES REQUIRED TO CARRY OUT AN OBJECTIVE OR PROJECT
DETERMINE THE ACTIVITIES WHICH AFFECT PROJECT DURATION
PREPARE PLANS (VERBAL OR DIAGRAM) WHICH SHOW ACTIVITIES, SEQUENCES, RESOURCES, CRITICAL ACTIVITIES, ACTIVITY START AND COMPLETION DATES
ANTICIPATE FUTURE REQUIREMENTS BY PREPARING REQUISITIONS FOR RESOURCES
ESTABLISH PRIORITIES BETWEEN QUALITY, QUANTITY, AND COMPLETION TIME FOR WORK
DELEGATE AUTHORITY COMMENSURATE WITH RESPONSIBILITY FOR WORK PERFORMANCE
AMEND PLANS TO COMPENSATE FOR CHANGED CONDITIONS

ANNEX C to
CHAPTER IV

WORKER ☐

SUPERVISOR ☐

GENERIC DATA AND PEOPLE SKILLS QUESTIONNAIRE

OCTOBER 1973

DATE OF INTERVIEW _____ LOCATION OF INTERVIEW _____

CCDO OCCUPATION _____ CCDO NO. _____

COMPANY/ORGANIZATION _____

ADDRESS _____ PHONE NO. _____

PERSON INTERVIEWED _____
(name and title)

REPORT ☐

SHORT SUMMARY ☐

COMPLETE SUMMARY ☐

NOTES TO INTERVIEWER

- The purpose of this questionnaire is to determine, by questioning, the generic data and people skills which are used on the job and, of those, which ones were required on entry to the job.
- SKILLS HELD BUT NOT USED ON THE JOB ARE NOT TO BE RECORDED.
- The worker and supervisor should not be shown each other's responses.
- MAKE NO ASSUMPTIONS. SKILLS USED ON THE JOB ARE FREQUENTLY DIFFERENT FROM WHAT YOU MAY EXPECT.
- If the interviewee does not understand a question, rephrase it.
- If in doubt about a response, ask for an example or for an explanation of the skill used. Specify the exact application of the skill used where you consider it appropriate.
- For supervisor interviews, rephrase questions to identify skills used by the worker to be interviewed.

Instrument developed by:

Training Research and Development Station

Department of Manpower and Immigration

Prince Albert, Saskatchewan

GENERIC DATA & PEOPLE SKILLS QUESTIONNAIRE

INSTRUCTIONS

1. Review notes to interviewer (front cover).

2. Explain the purpose of the interview to the respondent.

3. Remove the interviewee guide from this questionnaire and give it to the respondent to examine during the interview.

4. Reading

   a. Read all lead statements and items to the respondent unless otherwise indicated on the questionnaire.

   b. DO NOT read boxed headings as they are meant to guide the interviewer in the question content.

   c. DO NOT read items printed in block letters. These items should be presented to the respondent for examination and selection.

5. Rephrasing

   a. This questionnaire has been written for the worker in an occupational area. The same questionnaire is to be used for the worker's supervisor's interview with a minimum of modification. For example:

      the question: In which of the following ways do you use numbers in your work?

      becomes: In which of the following ways does (name of worker) use numbers in (his, her) work?

   b. If the respondent tells you to rephrase an item re-read the question first then, if necessary, rephrase the question for clarification. Be sure to maintain the content of the item.

6. Recording

   a. Rephrase column: There are two types of records to be kept in this column. The first is an indication that the item was re-read. (Mark ☑). The second is an indication that the item was rephrased for clarification (mark ☒).

   b. Job and Entry columns: The purpose of these columns is to separate the skills used on the job from those required on job entry. (Mark ☑ JOB or ☑ ENTRY). Be sure not to mark both columns.

   c. Demographic Information: Be sure to complete the form on the cover page of this questionnaire. In order to ensure a high degree of accuracy and consistency in the transfer of this information:

      (1) use the pens provided
      (2) print requested material on cover page.

   d. Summary of Rephrasing: For each occupation interviewed prepare a summary and description of the items rephrased on the forms provided. In order to prepare for this summary, note your rephrasing directly on this questionnaire.

GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

USE OF NUMBERS

Most employees use numbers to some degree in their work. Although some of the answers to the following may seem obvious, we would like to completely assess the use of numbers.

In which of the following ways do you use numbers in your work:

			REPHRASE	JOB	ENTRY
Whole Numbers	1	Read	1 ☐	1 ☐	1 ☐
	2	Write	2 ☐	2 ☐	2 ☐
	3	Count	3 ☐	3 ☐	3 ☐
	4	Add or Subtract	4 ☐	4 ☐	4 ☐
	5	Multiply or Divide	5 ☐	5 ☐	5 ☐
	6	Round Off	6 ☐	6 ☐	6 ☐
Roman Numerals					
Do you read or write					
	7	Roman numerals: (ie: I, IV, X)	7 ☐	7 ☐	7 ☐
If answer to No 7 is 'no' omit these questions →	8	Up to X	8 ☐	8 ☐	8 ☐
	9	Up to XX	9 ☐	9 ☐	9 ☐
	10	Up to XXX	10 ☐	10 ☐	10 ☐
	11	Up to L	11 ☐	11 ☐	11 ☐
	12	C and over	12 ☐	12 ☐	12 ☐
Fractions	13	Read	13 ☐	13 ☐	13 ☐
	14	Write	14 ☐	14 ☐	14 ☐
	15	Add or Subtract	15 ☐	15 ☐	15 ☐
	16	Multiply or Divide	16 ☐	16 ☐	16 ☐
Decimals	17	Read	17 ☐	17 ☐	17 ☐
	18	Write	18 ☐	18 ☐	18 ☐
	19	Add or Subtract	19 ☐	19 ☐	19 ☐
	20	Multiply or Divide	20 ☐	20 ☐	20 ☐
	21	Round Off	21 ☐	21 ☐	21 ☐
	22	Use decimals only with respect to dollars and cents	22 ☐	22 ☐	22 ☐
Per Cent	23	Read	23 ☐	23 ☐	23 ☐

GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

			REPHRASE	JOB	ENTRY
	24	Write	24 ☐	24 ☐	24 ☐
	25	Calculate % of a number (5% of 3.00 = ___)	25 ☐	25 ☐	25 ☐
	26	Calculate % one number is of another (75 is ___% of 90)	26 ☐	26 ☐	26 ☐
	27	Calculate a number when a % of it is known (10% of ___ = 70)	27 ☐	27 ☐	27 ☐
	28	Calculate the average of a group of numbers	28 ☐	28 ☐	28 ☐
Equivalents	29	Does your work involve the conversion of: Fractions: (Example ¼ = 25% or ¼ = .25)	29 ☐	29 ☐	29 ☐
	30	Decimals: (Example .5 = ½ or .5 = 50%)	30 ☐	30 ☐	30 ☐
	31	Percentages: (Example 5% = .05 or 5% = 1/20)	31 ☐	31 ☐	31 ☐
Solve Problems	32	In your work do you ever have to select the math operations and, if more than one, decide the order in which they are done?	32 ☐	32 ☐	32 ☐
Ratio and Proportion	33	Do you use ratio to show comparisons between two numbers? Example: gas oil mix 16:1, or compression ratio 8:1.	33 ☐	33 ☐	33 ☐
	34	Do you use proportion to solve problems like 4:6 = 3:( )? For example 4 gallons of gas requires 40 oz. of oil. How much oil would be needed for 3 gallons? $\frac{4}{40} = \frac{3}{(\ )}$?	34 ☐	34 ☐	34 ☐
Areas, Perimeters and Volumes	35	Does your work involve the calculation of: Areas	35 ☐	35 ☐	35 ☐
	36	Perimeters	36 ☐	36 ☐	36 ☐
	37	Volumes (specify)	37 ☐	37 ☐	37 ☐
Algebra	38	Solve problems algebraically with one unknown: Solve this problem by first writing a word sentence showing how the facts and unknown are related, then writing an equation and then solving it. Problem: There are 3 times as many workers on the day shift as on the night shift. The total number of workers is 30. How many are on the night shift?	38 ☐	38 ☐	38 ☐
	39	Do you make use of formulas such as $V = \frac{3M + Y}{Z}$ and have to insert the quantities for M, Y and Z and solve for V?	39 ☐	39 ☐	39 ☐

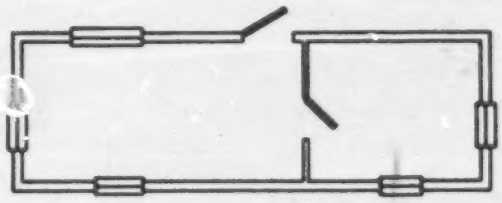
GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

	REPHRASE	JOB	ENTRY
40 Write, simplify and solve two variable algebraic problems	40 ☐	40 ☐	40 ☐
41 Write, simplify and solve quadratic equations	41 ☐	41 ☐	41 ☐
Other Calculations			
42 Use tables of logarithms	42 ☐	42 ☐	42 ☐
43 Calculate with a Slide Rule	43 ☐	43 ☐	43 ☐
44 Perform Trigonometric Calculations (specify)	44 ☐	44 ☐	44 ☐

MATHEMATICAL DRAWINGS *Some jobs involve mathematical drawings. This may ask for simple recognition. For example, a truck driver may have to recognize road symbols and a draftsman will not only have to recognize mathematical drawings but produce them.*

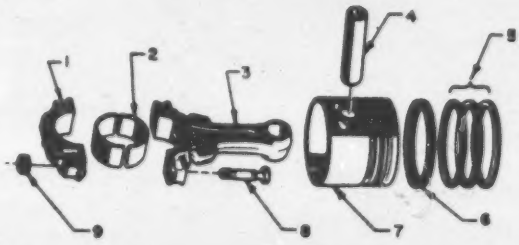
45 In your work do you have to make use of common objects such as circles, triangles, spheres, rectangles, squares, etc.	45 ☐	45 ☐	45 ☐
46 Do you have to recognize common angles such as 15, 30, 45 and 90?	46 ☐	46 ☐	46 ☐
47 Do you draw, sketch, or form these figures?	47 ☐	47 ☐	47 ☐
48 Do you read scale drawings such as blueprints?	48 ☐	48 ☐	48 ☐

Blueprint:



49 Do you draw to scale?	49 ☐	49 ☐	49 ☐
50 Do you take measurements from scale drawings?	50 ☐	50 ☐	50 ☐
51 Do you have to read assembly drawings?	51 ☐	51 ☐	51 ☐

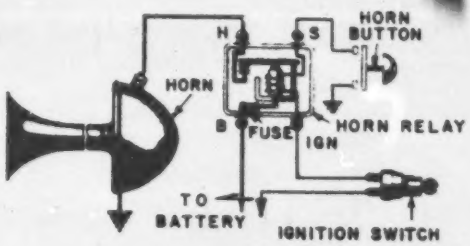
Assembly:



GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

	REPHRASE	JOB	ENTRY
52 Do you have to read schematic drawings?	52 ☐	52 ☐	52 ☐

Schematic:



MEASUREMENT

Many employees have involvement with measurement. Stenographers may be involved with weight, when using postage meters, and carpenters with length.

In your work do you have to estimate any of the following measurements?

53 Time (e.g. how long it will take to do a task)	53 ☐	53 ☐	53 ☐
54 Weight (how much something probably weighs)	54 ☐	54 ☐	54 ☐
55 Distance (inches, feet, yards, miles)	55 ☐	55 ☐	55 ☐
56 Area (square feet, square yards, etc.)	56 ☐	56 ☐	56 ☐
57 Liquid Volume (quarts, gallons, etc.)	57 ☐	57 ☐	57 ☐
58 Spatial volume (cubic yards, cubic inches, etc.)	58 ☐	58 ☐	58 ☐

In your work do you have to actually measure:

59 Time	59 ☐	59 ☐	59 ☐
60 Weight	60 ☐	60 ☐	60 ☐
61 Distance	61 ☐	61 ☐	61 ☐
62 Liquid Volume	62 ☐	62 ☐	62 ☐

In your measurements do you read:

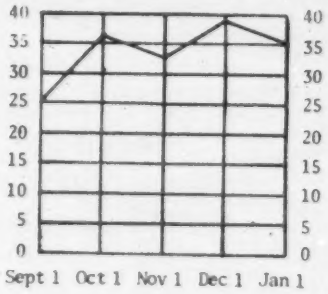
63 Scales such as postage meters, weigh scales, thermometers, etc.	63 ☐	63 ☐	63 ☐
64 Do you use vernier scales such as micrometers?	64 ☐	64 ☐	64 ☐

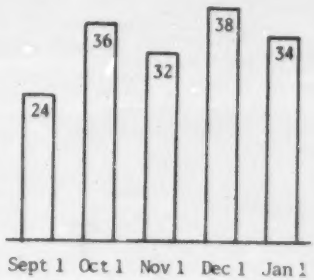
In your work do you use any of the following units of measure:

65 Kilometre, metre, centimetre	65 ☐	65 ☐	65 ☐
66 Kilogram, gram, milligram	66 ☐	66 ☐	66 ☐
67 Kilolitre, litre, millilitre	67 ☐	67 ☐	67 ☐

GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

	REPHRASE	JOB	ENTRY
In your work do you make use of tables to perform the following conversions:			
68 Kilometres, metres, centimetres to miles, yards or reverse inches	68 ☐	68 ☐	68 ☐
69 Kilograms, grams, centigrams to pounds or reverse ounces	69 ☐	69 ☐	69 ☐
70 Litres, Millilitres, Cc's to cubic inches, cubic feet, quarts or reverse gallons, bushels	70 ☐	70 ☐	70 ☐
71 Does your work involve the use of graphs?	71 ☐	71 ☐	71 ☐
72 Do you record information on graphs?	72 ☐	72 ☐	72 ☐
73 Do you construct (draw) graphs?	73 ☐	73 ☐	73 ☐





READING

Reading to some degree is applied in all occupations. In this section we are interested in, not only, what is read but why things are read.

In your work do you read:			
74 Notes	74 ☐	74 ☐	74 ☐
75 Letters	75 ☐	75 ☐	75 ☐
76 Memos	76 ☐	76 ☐	76 ☐
77 Forms such as work orders, job orders, vouchers, claims purchase orders.	77 ☐	77 ☐	77 ☐

GENERIC SKILLS IN A & PEOPLE QUESTIONNAIRE

	REPHRASE	JOB	ENTRY
78 Charts (excluding maps, lists and two column tables)	78 ☐	78 ☐	78 ☐

ORDER SIZE	TO FIT HEIGHT (INCHES)	WILL FIT AVERAGE CHEST (INCHES)	WILL FIT AVERAGE WAIST (INCHES)	TROUSER SEAM (INCHES)
1	UP to 31	20	20	11½
2	32-34	21	20½	12½
3	35-37	22	21	13½
4	38-40	23	21½	15½
5	41-43	24	22	17½
6	44-46	25	22½	19
7	47-48	25½	23	20½
8	49-50	26½	23½	21½
9	51-52	27½	24	22½
10	53-54	28	24½	24
11	55-56	28½	25	25½
12	57-58	29½	25½	26½
14	59-61	31½	26½	28
16	62-64	33	27½	29
18	65-66	34½	28½	30
20	67-68	36	29½	31

From	To Vancouver		To Lethbridge		To Calgary		To Edmonton	
	Air	Rail	Air	Rail	Air	Rail	Air	Rail
Winnipeg	63	32	43	26	43	20	43	20
Toronto	109	50	89	48	89	42	89	42
Montreal	120	52	100	49	100	43	100	43
Windsor	112	54	92	50	92	44	87	44
Moncton	149	67	129	64	129	58	129	58

79 Policy manuals, regulations and instructions	79 ☐	79 ☐	79 ☐

In reading and listening the skills of literal, interpretive and evaluative comprehension apply. Literal comprehension would require knowing the facts, interpretive comprehension would require knowing purposes and meaning. Evaluative comprehension requires the skill of using judgment.

Which of the following best describes the reading you do in your work

80	LITERAL	- READ FOR SPECIFIC FACTS SUCH WRITTEN MATERIALS AS TELEPHONE BOOKS, DICTIONARIES, ETC.	80 ☐	80 ☐	80 ☐
81	INTERPRETIVE	- READ WRITTEN MATERIALS THAT REQUIRE YOU TO GENERALIZE, EXPLAIN OR MAKE COMPARISONS EX: YOU READ A STATEMENT IN YOUR POLICY MANUAL AND EXPLAIN THE STATEMENT TO OTHERS.	81 ☐	81 ☐	81 ☐
82	EVALUATIVE	- JUDGE VALUE OR USEFULNESS OF WRITTEN MATERIAL.	82 ☐	82 ☐	82 ☐

Which of the following best describes the listening you do in your work

83	LITERAL	- LISTEN FOR SPECIFIC FACTS OR DIRECTIONS EX: YOUR SUPERVISOR GIVES YOU A ONE-STEP ORAL INSTRUCTION AND YOU CARRY IT OUT.	83 ☐	83 ☐	83 ☐
84	INTERPRETIVE	- RECEIVE ORAL INSTRUCTIONS OR INFORMATION THAT REQUIRE YOU TO UNDERSTAND OPINIONS, PURPOSES AND INTENTIONS. EX: YOUR SUPERVISOR GIVES YOU GENERAL INSTRUCTIONS AND YOU INTERPRET EXACTLY WHAT IS TO BE DONE.	84 ☐	84 ☐	84 ☐
85	EVALUATIVE	- JUDGE VALUE OR USEFULNESS OF ORAL INFORMATION. EX: A CUSTOMER TELLS YOU HOW YOUR PRODUCTS OR SERVICES MIGHT BE IMPROVED AND YOU ACT WITH JUDGMENT.	85 ☐	85 ☐	85 ☐

GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

		REPHRASE	JOB	ENTRY
WRITING	*We would like to know to what extent writing is involved in various occupations. Some people may only fill in forms with words or phrases while others may compose lengthy written works.*			
	In your work do you:			
	86 Write letters or notes	86 ☐	86 ☐	86 ☐
If answer to No. 86 is 'no' omit these questions	87 Write (compose) external letters	87 ☐	87 ☐	87 ☐
	88 Write form letters	88 ☐	88 ☐	88 ☐
	89 Write single paragraph letters only	89 ☐	89 ☐	89 ☐
	90 Write (compose) internal memos or letters	90 ☐	90 ☐	90 ☐
	91 Write only short notes	91 ☐	91 ☐	91 ☐
	92 Make notes of information or directions received orally.	92 ☐	92 ☐	92 ☐
	In your work do you fill in or complete forms using:			
	93 Short phrases and/or figures	93 ☐	93 ☐	93 ☐
	94 Sentences	94 ☐	94 ☐	94 ☐
	95 Paragraphs	95 ☐	95 ☐	95 ☐
	Some jobs require the making of reports, sometimes reporting factually, and, sometimes, evaluating such things as work done, future markets, etc., which require inclusion of recommendations. At times, writers of these reports are given the information to write the reports while, other times, information must be researched and analyzed.			
	96 In your work do you prepare reports	96 ☐	96 ☐	96 ☐
	Which require you to:			
	97 Show information but no suggestions or recommendations	97 ☐	97 ☐	97 ☐
If answer to No 96 is 'no' omit these questions	98 Include recommendations	98 ☐	98 ☐	98 ☐
	99 Decide what information you need to do the report (You receive instructions where you have to decide what information is required to do the report)	99 ☐	99 ☐	99 ☐
	100 Decide how to get the information (You make up your own forms, or charts or procedures to get the information)	100 ☐	100 ☐	100 ☐
	101 Analyze the information (You have to compare information against preset standards to determine which is most important and effective	101 ☐	101 ☐	101 ☐
	102 Evaluate the information (You set the standards for analysis. This may include making lists of advantages and disadvantages of different items)	102 ☐	102 ☐	102 ☐

GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

		REPHRASE	JOB	ENTRY
TALKING	*We are also concerned, about oral (word of mouth) communication required to carry out job functions.*			
In your work do you:				
103	Talk to people by giving task directions or instructions	103 ☐	103 ☐	103 ☐
104	Give information to others by talking to individuals	104 ☐	104 ☐	104 ☐
105	Give information to others by talking to groups	105 ☐	105 ☐	105 ☐
106	Use the telephone	106 ☐	106 ☐	106 ☐
107	Report progress to persons (ie. foremen, supervisors, etc.)	107 ☐	107 ☐	107 ☐
108	Obtain information by asking questions of individuals	108 ☐	108 ☐	108 ☐
109	Obtain information by asking questions of groups	109 ☐	109 ☐	109 ☐
110	Talk over problems pertaining to work situations with fellow employees	110 ☐	110 ☐	110 ☐
111	Talk to others to try to find ways and means of improving work relationships, conditions, etc.	111 ☐	111 ☐	111 ☐
112	Talk over personal matters (ie. impromptu counselling)	112 ☐	112 ☐	112 ☐
113	Talk over confidential matters	113 ☐	113 ☐	113 ☐
114	- with clients or customers	114 ☐	114 ☐	114 ☐
115	- with supervisor	115 ☐	115 ☐	115 ☐
116	- with management	116 ☐	116 ☐	116 ☐
117	Carry out a "free-wheeling" conversation (to put people at ease, to occupy people's time or to cultivate good public relations)	117 ☐	117 ☐	117 ☐
118	Ask other people for their opinion on how to perform a task (ie. foremen, supervisors, customers)	118 ☐	118 ☐	118 ☐
119	Give your opinion on how to perform a task			
	- occasionally	119 ☐	119 ☐	119 ☐
120	- frequently	120 ☐	120 ☐	120 ☐
121	Do you use methods in dealing with people which require you to go beyond everyday courtesy	121 ☐	121 ☐	121 ☐

GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

		REPHRASE	JOB	ENTRY
	122 Give formal (prepared) talks to individuals or groups	122 ☐	122 ☐	122 ☐
	123 Present factual information to an audience	123 ☐	123 ☐	123 ☐
If answer to	124 Deliver promotional presentations to an audience	124 ☐	124 ☐	124 ☐
No 122 is 'no'	125 - to individuals	125 ☐	125 ☐	125 ☐
omit these	126 - to groups	126 ☐	126 ☐	126 ☐
questions	127 Identify key members of the group when giving a presentation	127 ☐	127 ☐	127 ☐
	128 Handle open question periods after the presentation	128 ☐	128 ☐	128 ☐
In your work do you:				
	129 Support your point of view, work methods or procedures	129 ☐	129 ☐	129 ☐
	130 - with fellow employees	130 ☐	130 ☐	130 ☐
	131 - with supervisor	131 ☐	131 ☐	131 ☐
	132 - with customers	132 ☐	132 ☐	132 ☐
	133 Debate with others where there is some conflict or disagreement	133 ☐	133 ☐	133 ☐
	134 Take part in formal meetings or conferences which require you to present a point of view	134 ☐	134 ☐	134 ☐
	135 Take charge of a meeting or group discussion	135 ☐	135 ☐	135 ☐
	136 Guide members of a meeting toward a constructive goal	136 ☐	136 ☐	136 ☐
SORTING/CLASSIFYING	*This section asks about the tasks of sorting information and sorting objects by set lists or procedures. Further, we would like to know individual involvement in setting these lists and procedures.*			
In your work do you:				
	137 Sort information by a given list, e.g., - sort and file correspondence - sort vouchers by types - sort expenditures or receipts	137 ☐	137 ☐	137 ☐
	138 Sort parts, tools, equipment or products	138 ☐	138 ☐	138 ☐
	139 Set up lists for sorting the information or objects. eg: - prepare forms to record correspondence, telephone calls, or list of visitors. - prepare sub-headings or breakdowns for expenditures or receipts. - prepare forms to record information you believe others have a need to know. - prepare file systems.	139 ☐	139 ☐	139 ☐

GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

	REPHRASE	JOB	ENTRY
TROUBLE-SHOOTING *Some workers use what are known as diagnostic skills. They examine symptoms (or faults) to determine the problem which causes the symptom. Doctors use these skills to determine the reason for our aches and pains. Mechanics also use the skills to determine why a car won't start or doesn't run properly. We are trying to assess the use of trouble-shooting skills.*			
In your work:			
140 Do you consider "trouble-shooting" one of your major duties	140 ☐	140 ☐	140 ☐
(IF THERE IS A NEGATIVE ANSWER FOR QUESTION 140, IGNORE QUESTIONS 141 TO 154)			
Do you:			
141 Ever have to list, state or think of possible reasons which might cause certain faults or symptoms	141 ☐	141 ☐	141 ☐
142 Use reference manuals to guide you in selecting the possible reasons	142 ☐	142 ☐	142 ☐
143 Ever have to establish a priority to sequence in which to check the possible reasons	143 ☐	143 ☐	143 ☐
144 Have to personally check to find out which of the possible reasons is the correct one	144 ☐	144 ☐	144 ☐
145 Use reference manuals to guide you in how to check each reason	145 ☐	145 ☐	145 ☐
If you do have to check to find out which of several possible problems is the correct one do you do this by:			
146 Asking probing questions	146 ☐	146 ☐	146 ☐
147 Examining by smelling, touching, looking at or tasting	147 ☐	147 ☐	147 ☐
148 Using tools or instruments	148 ☐	148 ☐	148 ☐
If you make an error in your diagnosis would it probably result in:			
149 Loss of life	149 ☐	149 ☐	149 ☐
150 Some danger or hazard	150 ☐	150 ☐	150 ☐
151 Considerable loss of time	151 ☐	151 ☐	151 ☐
152 Some loss of time	152 ☐	152 ☐	152 ☐
153 Considerable financial loss	153 ☐	153 ☐	153 ☐
154 Some financial loss	154 ☐	154 ☐	154 ☐

GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

	REPHRASE	JOB	ENTRY
DISCRETION AND COMPLEXITY *How much freedom & involvement does an employee have in deciding the means to carry out tasks and in deciding the products of his tasks? What degree of difficulty does increased freedom bring? In each section are three or four statements. We ask you to read each section and choose the statement in each that most nearly describes your tasks.*			
Tools, Equipment and Materials			
155 ARE ALL SPECIFIED AND YOU HAVE NO CHOICE IN WHAT TO USE?	155 ☐	155 ☐	155 ☐
156 SOME ARE SPECIFIED. FOR OTHERS YOU USE GUIDES SUCH AS MANUALS, CHARTS, ETC., TO HELP YOU DECIDE.	156 ☐	156 ☐	156 ☐
157 YOU HAVE TO DECIDE, WITHOUT DIRECTION OR GUIDES, WHICH TOOLS, EQUIPMENT OR MATERIALS TO USE.	157 ☐	157 ☐	157 ☐
Procedures and Methods			
158 ALL ARE SPECIFIED AND YOU HAVE NO CHOICE IN THE PROCEDURES OR METHODS USED.	158 ☐	158 ☐	158 ☐
159 SOME ARE SPECIFIED. FOR OTHERS YOU USE GUIDES SUCH AS MANUALS AND OPERATING PROCEDURES, ETC., TO HELP YOU DECIDE ON METHODS & PROCEDURES.	159 ☐	159 ☐	159 ☐
160 YOU HAVE TO DECIDE, WITHOUT DIRECTION OR GUIDES, WHICH METHODS AND PROCEDURES TO USE.	160 ☐	160 ☐	160 ☐
Task Information			
161 ALL INFORMATION NEEDED TO DO YOUR TASKS IS INCLUDED IN THE ASSIGNMENT.	161 ☐	161 ☐	161 ☐
162 YOU HAVE TO EXAMINE TRADE MANUALS, CHARTS, ETC., TO OBTAIN SOME INFORMATON NEEDED TO DO TASKS.	162 ☐	162 ☐	162 ☐
163 YOU HAVE TO RECALL OR LOOK UP VARIOUS THEORIES (NOT JUST TABLES, FORMULAS OR FACTS) AS PART OF THE INFORMATION NEEDED TO DO YOUR TASKS.	163 ☐	163 ☐	163 ☐
164 YOUR TASKS REQUIRE THE USE OF CREATIVE THEORY BEYOND STANDARD PROFESSIONAL AND TRADE LITERATURE.	164 ☐	164 ☐	164 ☐
Products or services performed (tasks done at work)			
165 ARE COMPLETELY SPECIFIED AND YOU HAVE NO CHOICE IN THE RESULTS ACHIEVED.	165 ☐	165 ☐	165 ☐
166 YOU HAVE SOME CHOICE IN DECIDING THE SPECIFIC PRODUCT OR SERVICE PERFORMED.	166 ☐	166 ☐	166 ☐
167 YOU HAVE VARIOUS OPTIONS IN WHAT TO DO AND HAVE TO INVESTIGATE AND EVALUATE EACH OF THEM TO DECIDE ON THE SPECIFIC OUTPUTS OF YOUR WORK.	167 ☐	167 ☐	167 ☐
168 THERE IS SOME QUESTION ON WHAT PRODUCTS OR SERVICES SHOULD BE EXPECTED AS A RESULT OF YOUR WORK, AND YOU HAVE TO CONTROL AND EXPLORE MANY VARIABLES AND FORMULATE POSSIBLE RESULTS TO DECIDE THE SPECIFIC OUTPUTS OF YOUR WORK.	168 ☐	168 ☐	168 ☐

GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

	REPHRASE	JOB	ENTRY
Discretion between tasks (complete tasks such as fix that car, frame a wall, type this letter, do room 4, etc.)			
169 YOU HAVE NO CHOICE OF WHICH TASK TO DO NEXT	169 ☐	169 ☐	169 ☐
170 YOU ARE GIVEN TASK SEQUENCES FOR SOME TASKS AND HAVE A CHOICE IN SEQUENCE FOR OTHERS.	170 ☐	170 ☐	170 ☐
171 YOU ARE GIVEN REQUIRED COMPLETION TIME FOR SOME TASKS AND HAVE A CHOICE IN SEQUENCING THEM	171 ☐	171 ☐	171 ☐
172 EXCEPT FOR SOME PRIORITY TASKS, YOU HAVE NEARLY COMPLETE INDEPENDENCE IN SEQUENCING YOUR TASKS.	172 ☐	172 ☐	172 ☐
SUPERVISION — *Many jobs demand skills in supervision even though the job is not classed as a supervisory position. We would like to find out the extent to which various jobs demand certain supervisory skills.*			
In your work do you:			
173 Personally orient new employees	173 ☐	173 ☐	173 ☐
174 Show other workers how to perform tasks	174 ☐	174 ☐	174 ☐
175 - by demonstration	175 ☐	175 ☐	175 ☐
176 - by instruction	176 ☐	176 ☐	176 ☐
177 - by having them work with others	177 ☐	177 ☐	177 ☐
178 - using a prepared guide or manual	178 ☐	178 ☐	178 ☐
179 - using your own procedures	179 ☐	179 ☐	179 ☐
180 Establish what training should take place	180 ☐	180 ☐	180 ☐
181 Assess training needs	181 ☐	181 ☐	181 ☐
182 Personally check on tasks performed	182 ☐	182 ☐	182 ☐
In your work do you:			
183 Assign tasks to other workers	183 ☐	183 ☐	183 ☐
184 Use persuasion in any way	184 ☐	184 ☐	184 ☐
185 - on other workers	185 ☐	185 ☐	185 ☐

If answer to No 174 is 'no', omit these questions

GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

		REPHRASE	JOB	ENTRY
186	- clients or customers	186 ☐	186 ☐	186 ☐
187	Tell other workers when a task should be completed (time requirement)	187 ☐	187 ☐	187 ☐
188	Make recommendations for hiring	188 ☐	188 ☐	188 ☐
189	Personally hire employees	189 ☐	189 ☐	189 ☐
190	Make recommendations for dismissing employees	190 ☐	190 ☐	190 ☐
191	Personally dismiss employees	191 ☐	191 ☐	191 ☐
192	Refer employees to counselors, supervisors or other informed people for assistance.	192 ☐	192 ☐	192 ☐
	We view interviews as a method of questioning either individuals or groups to obtain information.			
	In your work do you:			
193	Conduct interviews	193 ☐	193 ☐	193 ☐
194	Conduct structured interviews (where a prepared list of questions is used)	194 ☐	194 ☐	194 ☐
195	Conduct unstructured interviews (where only the general purposes of the interview are known and the questions are not prepared in advance)	195 ☐	195 ☐	195 ☐
196	Interview job applicants	196 ☐	196 ☐	196 ☐
197	Interview fellow workers	197 ☐	197 ☐	197 ☐
198	- individuals	198 ☐	198 ☐	198 ☐
199	- groups	199 ☐	199 ☐	199 ☐
200	Interview clients or customers	200 ☐	200 ☐	200 ☐
201	- individuals	201 ☐	201 ☐	201 ☐
202	- groups (more than one person)	202 ☐	202 ☐	202 ☐

If answer to No 193 is 'no', omit these questions

GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

		REPHRASE	JOB	ENTRY
	In the interview do you ascertain:			
203	Facts or information	203 ☐	203 ☐	203 ☐
204	Opinions or beliefs	204 ☐	204 ☐	204 ☐
205	Needs, interests or desires (ex. a recreation director finds out what people are interested in doing)	205 ☐	205 ☐	205 ☐
	In your work:			
206	Do you talk to other people about their problems	206 ☐	206 ☐	206 ☐
207	Do you have to assist others in finding solutions to their problems	207 ☐	207 ☐	207 ☐
208	Do you personally deal with grievances	208 ☐	208 ☐	208 ☐
209	- workers	209 ☐	209 ☐	209 ☐
210	- clients or customers	210 ☐	210 ☐	210 ☐
211	Do you become involved with problems not related to work (ie. personal problems, etc.)	211 ☐	211 ☐	211 ☐
212	Do you have any responsibility for follow-up counselling (ie. written reports, follow-up sessions)	212 ☐	212 ☐	212 ☐
213	Do you decide when third parties should be brought into counselling, (ie: other agencies, husbands, wives or friends)	213 ☐	213 ☐	213 ☐
	In your work:			
214	Do you have to co-ordinate the resources of one or more of the following: time, money, people, location	214 ☐	214 ☐	214 ☐
	In your work:			
215	Are you responsible for any long term planning?	215 ☐	215 ☐	215 ☐
216	Do you:			
	1. set policy	216 ☐	216 ☐	216 ☐
217	2. estimate costs	217 ☐	217 ☐	217 ☐
218	3. allocate resources	218 ☐	218 ☐	218 ☐
219	4. delegate responsibility	219 ☐	219 ☐	219 ☐
220	5. prepare an activity sequence	220 ☐	220 ☐	220 ☐
221	6. adjust plans to meet changes of conditions	221 ☐	221 ☐	221 ☐

If answer to No 206 is 'no', omit these questions

GENERIC SKILLS DATA & PEOPLE QUESTIONNAIRE

ROLE ADJUSTMENTS		REPHRASE	JOB	ENTRY
Most jobs require adjusting performance with certain people and in certain situations. For example, a salesclerk must "be nice" with customers at all times or a worker may have to adjust his performance when called into a management meeting.				
	222 Is it necessary in your work to adjust your role performance with various individuals and situations	222 ☐	222 ☐	222 ☐
If answer to No 222 is 'no' omit these questions	223 - with fellow employees	223 ☐	223 ☐	223 ☐
	224 - with supervisor	224 ☐	224 ☐	224 ☐
	225 - with management	225 ☐	225 ☐	225 ☐
	226 - with customers	226 ☐	226 ☐	226 ☐
FOR SUPERVISORS ONLY				
1. Is there a compulsory academic requirement for entry into this occupation?				
	Grade - specify			
	or			
	Adult Equivalency - specify			
2. Are any vocational training courses required for entry into this position?				
	- specify			
3. Were you ever a _____? (refer to occupation being surveyed such as secretary or plumber, etc.)				

GENERIC DATA & PEOPLE SKILLS QUESTIONNAIRE

INTERVIEWEE GUIDE

For the questions

IN YOUR WORK, DO YOU . . . . . ?

Please select your answer from the following:

NO

REPHRASE

YES

JOB *(Used on job)*

ENTRY *(Required on job entry)*

Your file / Votre référence

Our file / Notre référence

Manpower and Immigration / Main-d'œuvre et Immigration

Training Research and Development Station

This letter will introduce who is representing the Training Research and Development Station of Canada Manpower and Immigration.

The Station is presently conducting interviews to ascertain those skills common to a variety of occupations. The data gathered from these interviews will allow us to develop educational packages for pre-employment training of the occupations involved.

It is our hope that this training will eventually serve you, the employer, as well as the employee by having pre-employment education based on the employment data received from you, along with other employers.

Your cooperation in this study is greatly needed and appreciated. If you are interested in the results of the studies, data will be forwarded to you on the occupation involved.

Yours truly,

Wally Kawula,
Industrial Programs.

154-8th Street, East, P.O. Box 1565, Prince Albert, Saskatchewan, Canada

DATA COLLECTION PROCESS

- Walter J. Kawula
- Arthur De W. Smith

A. SELECTION OF OCCUPATIONS

At this stage in the development of the study it was only deemed essential to test the approach on a variety of occupations. Later on a more systematic approach can be taken to select the occupations. However, the following guides were used:

1. Most industries to be represented in the survey.

2. Many occupations to be chosen in which workers' skills are normally developed by federal or provincial training programs.

3. Occupations to generally represent areas in which there are large numbers of people in the working force.

4. A number of occupations included in the first survey to be replicated in this phase.

5. A number of occupations to include first line foreman or supervisors.

In addition to the above criteria some changes were made by provincial officials to meet their immediate needs.

The supervisory occupations had not been selected at the time of preparing this report.

B. SELECTION OF EMPLOYERS

The following criteria were used in an attempt to obtain an appropriate cross section of workers:

1. A number of the occupations to be replicated in three different areas of Canada.

2. Occupations to be surveyed in six of the provinces, as follows:

   a. Nova Scotia
   b. Ontario
   c. Manitoba
   d. Saskatchewan
   e. Alberta
   f. British Columbia

3. Occupations to be surveyed in basically three different types of areas:

   a. Large urban - over 300,000
   b. Medium urban - 25,000 to 200,000
   c. Rural - under 5,000

4. Whenever possible, only one worker and his immediate supervisor, to be interviewed for any one employer.

5. A total of 10 workers to be surveyed for each occupation, sub-divided as follows:

   a. 2 to 3 workers from large employers;
   b. 2 to 3 workers from small employers;
   c. 2 to 3 workers from specialized employers;
   d. 2 to 3 workers from government employers.

To carry out these surveys in areas outside the immediate vicinity of Prince Albert it was deemed essential to obtain the collaboration of local officials who could help to locate potential interviewers and to supervise the data collection process. With the interest and enthusiasm attained in the dissemination of the first phase of this study there was no problem in acquiring this collaboration. Indeed there were a number of cases where offers to assist had to be declined. The co-operation of individuals and organizations is gratefully acknowledged.

The actual selection of specific employers was left to the responsibility of the collaborating supervisor. The interviewers made tentative selections from which the supervisors approved those which appeared most suitable to obtain the required degree of representation from the different types of employers.

C. SELECTION OF INTERVIEWERS

The interviewers were expected to be able to: make the arrangements for the interviews with no financial compensation to the employers; to use the same interview instrument with a variety of workers and supervisors for a number of occupations; to make arrangements with and obtain data from occupational instructors; and to accurately record the information obtained. They perforce had to:

1. Persuade workers, supervisors and instructors to grant the time for the interviews.

2. Solicit responses by phrasing question and statements in a context meaningful to the occupational background and the conversational style of the interviewee.

3. When necessary, rephrase questions until the interviewee understood the information sought in the interview.

4. Rephrase the questions on the interview form when obtaining data from supervisors.

To satisfy the above requirements the following criteria were used for the selection of interviewers:

1. Sufficient knowledge of the concepts to be able to rephrase the questions and apply judgement when interviewers showed examples of or explained how they used the skills.

2. Sufficient general knowledge of work terms to be able to comprehend occupational jargon and establish sound communications with the interviewees.

3. Persuasive and easy to meet - able to make a favourable impression and sufficiently disciplined to obtain accurate data in a time frame which would not disturb the employers.

4. Sufficient and obvious maturity so rapport could be established quickly with supervisors (normally the point of first contact).

5. Willingness to accept ideas on skill usage which might be contrary to personal notions and experience.

The collaborating supervisor accepted the responsibility for the initial screening and selection of prospective interviewees. The final selection and necessary training was the responsibility of this Station.

In addition to the use of the criteria and the care which was applied in the recruiting program it was deemed essential to provide a structured training program to ensure consistency in the interpretation of the interview items, minimal interviewer bias, and a thorough understanding of the process. The following activities were included in the training program:

1. Briefing on the Generic Skills study;

2. Examination of criteria for selection of respondent;

3. Overview of questionnaire content;

4. Recording instructions;

5. Demonstration interview;

6. Practice interview;

7. Selection of employers;

8. Final briefing and reporting arrangements.

The training involved two three-hour sessions in each of the locations chosen for data collection. In each case, the training sessions were spread over a two day period to allow adequate time between the demonstration interview and the remaining activities.

Each interviewer was provided with a manual containing the following:

1. An introduction to the Training Research and Development Station.
2. An abbreviated description of the Generic Skills Study.
3. General instructions on interviewing techniques.
4. General instructions on questionnaire use.
5. Questionnaire recording instructions.
6. Description of occupations selected.
7. Employer Selection Forms.
8. Summary of Rephrasing Forms.

The collaborating supervisor was involved in those portions of the training program involving employer selection and the initial and final briefings.

D. THE INTERVIEWER'S TASKS

The interviewers were required to carry out the following tasks:

1. Select employers for approval of data collection supervisor.
2. Arrange interviews with supervisors and workers either by appointment or by direct contact.
3. Interview and record data supplied by 10 workers and their immediate supervisors.
4. Complete Summary of Rephrasing Forms.
5. Report progress periodically to data collection supervisor.
6. Prepare a final report which includes recommendations for improvement of the data collection process.

The chart at Annex A to this chapter indicates the location and occupations surveyed during November, 1973 to January, 1974.

In addition to the above, Mr. Garth Jackson of Fanshawe College in London, Ontario provided two staff interviewers who are surveying approximately 12 additional occupations and will be sharing the data.

Approximately 30 additional supervisory occupations will be surveyed during the period February-April, 1974.

ANNEX A to
CHAPTER V

OCCUPATIONS SURVEYED

Location	Supervisor	Number of Interviewers	Occupations Surveyed	
			Title	CCDO Code
Rural Nova Scotia	Mr. John Murely Dept. of Education, NS	1	M V Mech. Electrician Painter Carpenter	8581-110 8733-122 8785-110 8781-110
Toronto	Mr. William E. Sinnett, Humber College of Applied Arts and Technology	2	M V Mech. Painter Metal, Assembler Electrician Carpenter Package - Machine Mechanic	8581-110 8785-110 8529-222 to 299 8584-162 8733-122 8781-110 8799-126 8529-198
Brandon	Mr. H. Pallister, Assiniboine College	1	M V Mech. Electrician Carpenter Welder, Comb.	8581-110 8733-122 8781-110 8335-126
Regina	Mr. Walter Houseman, Wascana Institute of Applied Arts & Science	1	Nurse Aide Sheet Metal Workers Draughtsman Sales Person - Hardware Salesman - Insurance Sales Rep. - Various	3135-110 8333-118 2163-110 5135-154 5171-118 5133-114

(continued on next page)

OCCUPATIONS SURVEYED CONTINUED

Prince Albert & Saskatoon	Mr. Walter J. Kawula, Training Research and Development Station	3	Sales Clerk Farmer, General Other Mech. & Rep. Welder Comb. Cashier Receiving Clerk Janitor Const. Labourer Waiter, Formal Ser. Storeman Heavy Equip. Oper. Driver Salesman	5137-114 7111-110 8589-299 8335-126 4133-118 4153-122 6191-110 8798-114 6125-126 4155-126 8711-110 5193-118
Calgary	Mr. Richard F. Gaffney, Dept. of Advanced Education	2	Cook Clerk Typist Secretary Nursing Assistant Policeman Lineman	6121-114 4113-124 4111-110 3134-110 6112-158 8735-138
Vancouver	Mr. J.E. Jones Regional Office Dept. of Manpower and Immigration	1	Painter Machinist Accounting Clerk Taxi Driver Truck Driver	8785-110 8313-154 4131-134 9173-110 9175-110

SPECIFICATIONS FOR DEVELOPMENT OF REASONING AND INTERPERSONAL TRAINING PACKAGES

- Arthur De W. Smith
- Paul Curtiss
- Jim Depew

Specifications are being prepared to direct and guide the development of generic reasoning and interpersonal curriculum training packages. At this time it would appear that there is a necessity to develop the following components:

1. Instructional objectives for each generic skill identified.

2. Diagnostic, placement and achievement techniques.

3. Individualized learning packages for those skills where suitable learning materials are not available.

Many of the identified skills do not lend themselves to the use of paper and pencil exercises and tests. Many of them will require some grouping of students to practise skill performance. Nevertheless, the prescriptive, diagnostic and self-paced aspects of individualization have been set as prime objectives. This means that methods will have to be developed to quickly and readily ascertain which students who enter the program already can perform any of the required skills and for those which they have not already mastered, where they need to commence the program. It also means that, regardless of the grouping techniques used, students should not be forced into a lock step process.

At this time it is foreseen that a combination of texts, mediated instruction and peer instruction may possibly meet the required objectives. There is considerable evidence[1] that peer instructional systems can be effective and efficient, that students quickly develop the required skills and frequently prefer this method.

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1 *"Development and Implementation of a Quality Assured, Peer-Instructional Model"*, published by the Human Resources Research Organization and, Shirleen Schermerhorn; *"Peer Teaching"*, Learning and Development, Vol. 5, No. 3, Nov./Dec., 1973.

The training packages are to be designed to facilitate achievement of the following objectives:

1. To assist students to achieve the specific generic skills which are required for chosen occupations.

2. To allow students to gain recognition for skills attained outside the educational system.

3. To enable continuous intake and exit of students.

4. To provide a process by which adults may identify and acquire additional generic skills required to advance their careers.

The first and perhaps most important step in the preparation of the specifications for curriculum development is the specification of instructional objectives which describe the observable and measurable intent of the required outcomes of instruction for each of the identified skills. This is a fairly easy task for skills which are concrete and readily describable such as the elementary mathematics skills. It is extremely difficult in the field of interpersonal skills because of the attitudinal or affective requirements and the difficulty in establishing criteria. In examining such elementary skills as the use of attending behaviors (eye contact, body position and verbal following) criteria of skill mastery is difficult to establish. Verbal following is a useful skill to ensure that the intent of the speaker is understood - too much verbal following can distract from communication.

Similarly, skills of reasoning frequently involve a level of abstraction which is difficult to describe. Nevertheless, the instructional objectives will have to be written in precise, concrete terms so the development staff can prepare instructional packages with assurance that the instructional intent can be evaluated.

The instructional objectives for the reasoning skills have not, as yet, been developed.

An initial draft of the instructional objectives for the generic interpersonal skills has been completed. These will be re-considered when the data from the occupational surveys has been analyzed to obtain more precise information on the skill usage. They will also be further developed as the developers acquire further insight during the process of developing the diagnostic, placement and achievement techniques and when they are developing the learning methods.

The interpersonal instructional objectives which have thus far been developed are as follows:

UNIT I ATTENDING BEHAVIORS

ITEM A ELEMENTARY ATTENDING BEHAVIORS

OBJECTIVES

1. Use eye contact and attentive posture to indicate attentiveness and facilitate other person's communication.
2. Use eye contact, gestures, and body posture to facilitate communication, while speaking.
3. Recognize and interpret intent of sub-verbal and non-verbal cues to assure own understanding of a verbal communication.
4. Identify overt behaviors which may indicate listener's inability to hear.

ITEM B COGNITIVE ATTENDING BEHAVIORS

OBJECTIVES

1. Identify the main thrust of another's communication.
2. Distinguish between fact and opinion in another's communication.
3. Identify behaviors which may indicate listeners inability to understand a concept.
4. Identify the behavioral cues which may be indicators of role distance factors such as: physically retreating or approaching, duration of the eye contact, tenseness or relaxation.
5. Identify the behavioral cues which may be indicators of obvious mood changes.
6. Maintain in self an appropriate emotional climate to facilitate the communication process.

ITEM C REACTIVE ATTENDING BEHAVIORS

OBJECTIVES

1. Determine the validity of own assumptions by asking closed question of the speaker.
2. Confirm own understanding of another's message by paraphrasing it.
3. Confirm own understanding of another's message by using perception checks.

UNIT II ONE TO ONE CONVERSATION

ITEM A ARTICULATE ELEMENTARY CONVERSATION

OBJECTIVES

1. Use physical and cognitive attending behaviors to facilitate the process of communication.
2. Use conversational style appropriate to other persons age, sex, role status, etc.
3. Preface job conversations with a statement of intent.
4. Sequence and organize information for oral presentation to another.
5. Introduce one concept at a time to facilitate the listeners understanding.
6. Relate new concepts to previous pertinent conversations.
7. State and support own points by citing knowledge, experience or observation related to the discussion.
8. Ensure that the other person has the opportunity to state and support his points of concern.

ITEM B GIVE DIRECTIONS

OBJECTIVES

1. Give direction to another clearly, concisely and sequentially.
2. Ensure other person has the opportunity to confirm his understanding of the directions.
3. Check other person's understanding of directions by questioning the key activities to be performed.
4. Summarize to ensure understanding of directions given.

ITEM C TASK FOCUSSED CONVERSATION

OBJECTIVES

1. Identify the oral communication activities necessary to achieve a given objective or project.
2. Sequence the oral communication activities necessary to achieve a given objective or project.
3. Manage a conversation to direct it toward achievement of the pre-determined objective or project.

ITEM D PERSONABLE CONVERSATION

OBJECTIVES

1. Identify topics where the other person shows interest.
2. Determine, by overt responses to own conversation, whether the visitor or customer is interested in a free wheeling conversation or in a task focussed conversation.

3. Manage a free wheeling conversation for the purpose of diversion.

ITEM E EXPRESS OWN POINT OF VIEW

OBJECTIVE

1. State and support own point of view by citing knowledge, observation, experience, concerns or ideas related to the discussion.

UNIT III PARTICIPATE IN GROUP DISCUSSION

ITEM A PREPARATION FOR MEETINGS

OBJECTIVES

1. Describe and sequence activities needed to achieve the desired outcomes of a group meeting.
2. Develop an agenda for a structured meeting.

ITEM B GROUP MAINTENANCE

OBJECTIVES

1. Preface structured meeting with a statement of intent.
2. Ensure participation by group members according to their role and the relevance of their contributions.
3. Inhibit disruptive behaviours so the group can effectively proceed with the task.
4. Direct group discussion toward objectives of the meeting.

ITEM C PRESENTATION OF INFORMATION OR DIRECTIONS

OBJECTIVES

1. Give directions or information to a group clearly, concisely and sequentially.
2. Ensure that each group member has the opportunity to confirm his understanding and to seek clarification as required.
3. Test understanding of directions or information by asking probing questions.

ITEM D RESPOND TO INFORMATION OR DIRECTIONS

OBJECTIVES

1. Paraphrase to confirm own understanding of given information or directions.
2. Ask focused questions to clarify specific task directions.
3. Summarize given information and directions to demonstrate own understanding.
4. Take notes for any required future activity which are own responsibility.

ITEM E CONTROL GROUP DECISION MAKING

OBJECTIVES

1. Clarify speakers intended meaning by paraphrasing.
2. Clarify speaker's intended meaning by asking probing questions.
3. Poll group members to determine if a point of concensus has been achieved

4. Summarize group proceedings to permit discussion to advance, addressing as appropriate:

   a. points made;
   b. decisions reached;
   c. commitments agreed to.

5. Summarize opposing points of view and, appropriately mediate between them to effect compromise.

6. Identify the point where further discussion is counter-productive.

7. Direct the group to follow or comply with a particular point of view.

ITEM F PARTICIPATE IN GROUP DECISION MAKING

OBJECTIVES

1. State and support own point of view in a group with arguments intended to elicit support from other group members.

2. State and support a point of view in opposition to another position with arguments intended to elicit support from other group members.

3. Recognize the point where further disagreement with the group is counter productive and stop arguing.

4. Identify and state the points in the group position to which you can at least partially agree and request the group to proceed on the basis of your tentative agreement.

UNIT IV PARTICIPATING IN ORAL PRESENTATION

ITEM A PREPARATION FOR ORAL PRESENTATION

OBJECTIVES

1. Develop a list of resources to support oral presentation.
2. Prepare a plan showing the sequence and interrelationships of components of presentation.
3. Prepare resources to support an oral presentation.
4. Prepare guideline notes for an oral presentation.
5. Prepare a manuscript for an oral presentation.

ITEM B PRESENT FACTUAL INFORMATION

OBJECTIVES

1. Using guideline notes or manuscript, deliver a factual talk.
2. Use resources to support an oral presentation.
3. Use vocabulary attuned to the type of talk and level of understanding of the audience.
4. Invite audience to seek clarification of content material.
5. Respond to content questions by:
   a. rephrasing own statement.
   b. using examples.
   c. asking audience member to rephrase statement.

ITEM C LISTENING/RESPONDING TO A FACTUAL PRESENTATION

OBJECTIVES

1. Recognize and record main points of the speaker's presentation.
2. Identify appropriate responses or questions to be made during or after the presentation.
3. Make appropriate audience response during or following a presentation.
4. Ask probing questions during or following a presentation.

ITEM D DELIVER A CONCEPTUAL PRESENTATION

OBJECTIVES

1. Determine or anticipate the level of related knowledge of the audience.
2. Select information to be presented to achieve a given goal or criteria.
3. Select appropriate presentation aids needed to support a conceptual presentation.
4. Determine optimum environmental conditions needed for conceptual presentation.
5. Arrange or accommodate to given physical environment.
6. Invite the audience to question, challenge or comment on content points.
7. Paraphrase questions, challenges or comments to ensure own and audience understanding.
8. Tactfully dismiss irrelevant audience input.

ITEM E DELIVER A PERSUASIVE PRESENTATION

OBJECTIVES

1. Determine or anticipate the needs and expectations of the audience.
2. Determine or anticipate possible objections of the audience and design strategies to avert, compensate for or accommodate to these objections.
3. Identify key members of audience and represent the persuasive intent in a manner which will address their special needs or interests.
4. Deliver a persuasive presentation, addressing the needs and expectations of the audience, to accomplish the persuasive intent.
5. Modify style of delivery to achieve audience rapport.
6. Identify impact of specific words and themes on audience.
7. Identify behavioral cues which indicate audience acceptance or rejection.

ITEM F REACT TO A PERSUASIVE PRESENTATION

OBJECTIVES

1. Recognize how the speakers expressed thoughts differ from own.
2. Identify impact of specific words and themes.
3. Recognize when emotional appeals are used to compensate for weak arguments.
4. Distinguish between fact and opinion while listening to an oral presentation.
5. Recognize own point of decision re persuasive intent of speaker.

UNIT V SUPERVISORY AND INSTRUCTIONAL COMMUNICATIONS

ITEM A SUPERVISORY AND INSTRUCTIONAL COMMUNICATIONS

OBJECTIVES

1. Question worker to determine which tasks or sub tasks he can now perform.
2. Set objectives for workers and determine methods of achievement.
3. Develop, analyse and articulate course of action including criteria of time, sequence, quantity and quality.
4. Demonstrate expected work performance to the required criteria.
5. Supervise and provide feedback for "hands on" experience until performance criteria achieved.
6. Monitor and evaluate subordinates skills, characteristics, achievements and deficiencies.
7. Maintain records of subordinates characteristics, skills, achievements and deficiencies.

UNIT VI INTERVIEWING/COUNSELLING COMMUNICATION

ITEM A PREPARATION FOR INTERVIEWING/COUNSELLING

OBJECTIVES

1. Determine intended direction, and results of interview situation.
2. Determine the type and direction of required information.
3. Study available information about applicant, worker or customer to be interviewed.
4. Establish the environment and interview methods appropriate to the situation.

ITEM B CONTROLLING INFORMATION CENTERED INTERVIEWS

OBJECTIVES

1. Identify areas where interviewee speaks freely or is constrained.
2. Identify behavioural cues, indicating other's role status.
3. Interpret behavioural cues, indicating a mood change.
4. Interpret behavioural cues indicating others psychological distance.
5. Obtain information by asking closed and/or open questions.
6. Check interviewee's assumptions by asking closed questions.
7. Adjust or adjust to the other's mood, role or psychological distance as appropriate.

ITEM C PROBLEM CENTERED INTERVIEWS

OBJECTIVES

1. Establish or adjust to the mood, role or psychological distance of interviewee.
2. As appropriate, compromise divergent needs to effect resolution.
3. Ensure behavioural change by appropriate feedback, support or discipline.

The content of these instructional objectives are organized as follows:

UNIT I - ATTENDING BEHAVIORS

ITEM A - ELEMENTARY ATTENDING BEHAVIORS
ITEM B - COGNITIVE ATTENDING BEHAVIORS
ITEM C - REACTIVE ATTENDING BEHAVIORS

UNIT II - ONE TO ONE CONVERSATION

ITEM A - ARTICULATE ELEMENTARY CONVERSATION
ITEM B - GIVE DIRECTIONS
ITEM C - TASK FOCUSSED CONVERSATION
ITEM D - PERSONABLE CONVERSATION
ITEM E - EXPRESS OWN POINT OF VIEW

UNIT III - PARTICIPATE IN GROUP DISCUSSION

ITEM A - PREPARATION FOR MEETINGS
ITEM B - GROUP MAINTENANCE
ITEM C - PRESENTATION OF INFORMATION OR DIRECTIONS
ITEM D - RESPOND TO INFORMATION OR DIRECTIONS
ITEM E - CONTROL GROUP DECISION MAKING
ITEM F - PARTICIPATE IN GROUP DECISION MAKING

UNIT IV - PARTICIPATE IN ORAL PRESENTATIONS

ITEM A - PREPARATION FOR ORAL PRESENTATION
ITEM B - PRESENT FACTUAL INFORMATION
ITEM C - LISTEN/RESPOND TO A FACTUAL PRESENTATION
ITEM D - DELIVER A CONCEPTUAL PRESENTATION
ITEM E - DELIVER A PERSUASIVE PRESENTATION
ITEM F - REACT TO A PERSUASIVE PRESENTATION

UNIT V - SUPERVISORY AND INSTRUCTIONAL COMMUNICATION

ITEM A - SUPERVISOR AND INSTRUCTIONAL COMMUNICATION

UNIT VI - INTERVIEWING/COUNSELLING COMMUNICATION

ITEM A - PREPARATION FOR INTERVIEWING/COUNSELLING
ITEM B - CONTROLLING INFORMATION CENTERED INTERVIEWS
ITEM C - PROBLEM CENTERED INTERVIEWS